

FINAL REPORT

**Groundwater IRM
Quarterly Groundwater Monitoring Report
3rd Qtr - 2012**

**GE Aviation
Evendale, Ohio
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Groundwater IRM Quarterly Groundwater Monitoring Report 3rd Quarter - 2012

Prepared for:
GE Aviation
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TABLE OF CONTENTS

List of Tables	ii
List of Figures.....	ii
List of Appendices	ii
1 Introduction	1
2 Methods.....	2
2.1 Groundwater Level Monitoring	2
2.2 Groundwater Quality Monitoring.....	3
2.3 Quality Assurance/Quality Control.....	3
2.4 Statistical Analysis.....	3
3 Results	5
3.1 Field Observations.....	5
3.2 Analytical Results.....	5
3.2.1 QA/QC	5
4 Data Evaluation.....	6
4.1 Groundwater Elevation Data.....	6
4.1.1 Groundwater Levels and Pumping Influence.....	6
4.1.2 Vertical Hydraulic Gradients	7
4.1.3 Steady-State and Capture Zone Estimates.....	7
4.2 Groundwater Quality Data	8
4.2.1 Monitoring Well Data – Cross Contamination Analyses	8
4.2.2 Extraction Well and Influent	9
5 Summary.....	10
5.1 IRM-Related Monitoring	10
6 References.....	11

LIST OF TABLES

Table 1 – Location and Frequency of Hydraulic Control Monitoring (3Q-12)
Table 2 – Well Completion Data – Groundwater Level Monitoring
Table 3 – Well Completion Data – Groundwater Quality Monitoring
Table 4 – Summary of Groundwater Sampling Results (3Q-12) – Detected Parameters Only
Table 5 – Statistical Summary of Vertical Gradient Analysis – Perched to USG
Table 6 – Statistical Summary of Vertical Gradient Analysis – USG to LSG
Table 7 – Statistical Summary of Vertical Gradient Analysis – Perched to LSG
Table 8 – Statistical Summary of Steady-State Analysis
Table 9 – Summary of Groundwater Chemical Cross-Contamination Analysis
Table 10 – Summary of Extraction Well Influent Chemical Statistical Analysis

LIST OF FIGURES

Figure 1 – Groundwater IRM Monitoring Locations
Figure 2 – Estimated Drawdown and Capture Zone – Perched Unit
Figure 3 – Estimated Drawdown and Capture Zone – USG Unit
Figure 4 – Estimated Drawdown and Capture Zone – LSG Unit

LIST OF APPENDICES

Appendix A – Analytical Laboratory Reports
Appendix B – QA/QC Results and Data Verification
Appendix C – Hydrographs for Select Perched Zone, USG, and LSG Monitoring Wells
Appendix D – Hydrographs for Select Nested Well Series
Appendix E – Field Parameters and Total VOC Concentration Plots for Select Monitoring Wells
Appendix F – Total VOC and CVOC Concentration Plots for Extraction Wells

1 INTRODUCTION

O'Brien & Gere has prepared this report on behalf of the General Electric Company (GE) to present the results of groundwater monitoring activities conducted during July 1, 2012 through September 30, 2012 (herein referred to as Third Quarter 2012). Groundwater monitoring was conducted to monitor the temporal effect on groundwater conditions during the operation of a groundwater Interim Remedial Measure (IRM). The groundwater IRM, consisting of seven groundwater extraction wells and a groundwater treatment plant (GWTP), has been installed on the southern portion of the GE Aviation manufacturing facility (Facility) in Evendale, Ohio, within an area known as former Air Force Plant 36 (AFP 36) (Figure 1). The groundwater remedial measure was initiated as an IRM under a Resource Conservation and Recovery Act (RCRA) Corrective Action Permit with the objective of mitigating off-site migration of compounds of potential concern (COPCs), while minimizing the risk of cross-contamination and/or reducing the effectiveness of biodegradation processes.

Groundwater monitoring data are evaluated and reported after each sampling event, including evaluations of quality assurance, cross-contamination potential, and significant short-term anomalies. Long-term trends and overall remediation progress will be evaluated and reported annually, at the beginning of each year.

The scope of groundwater monitoring during this period is described below. Unless indicated otherwise, groundwater monitoring activities were conducted in accordance with the approach and methods outlined in detail in the *IRM Performance Monitoring Plan* (PMP), prepared by O'Brien & Gere (2010). The groundwater monitoring network consists of a total of 116 wells completed in three water-bearing units (Perched Zone, Upper Sand and Gravel (USG), and Lower Sand and Gravel (LSG)); however, only selected wells are monitored at the frequencies and for the parameters described in the PMP. As outlined in the PMP, the general scope of groundwater monitoring activities described in this report includes:

- Groundwater level monitoring using manual electronic as well as pressure transducer measurements at frequencies outlined in the PMP. Monitoring was conducted using a total of 66 wells completed in the Perched Zone (21 wells), USG (23 wells), and LSG (22 wells)
- During the Third Quarter 2012 groundwater samples were collected from only two wells: PMW-3S (completed in the USG), and PMW-3D (completed in the LSG). As explained in the *Third Quarterly Progress Report* from GE to U.S. EPA, dated October 10, 2012, this work was performed in addition to the PMP-specified activities. Groundwater quality sampling using passive diffusion bag samplers (PDBs) for analysis of volatile organic compounds (VOCs) and field bioparameters (*e.g.*, dissolved oxygen [DO] and oxidation-reduction potential [ORP]) in accordance with methods outlined in the PMP.
- Monthly sampling of groundwater from actively pumping extraction wells for analysis of VOCs
- Evaluation of data from groundwater level and quality monitoring, including statistical analysis to address hydrogeologic conditions of stability (equilibrium) and potential cross-contamination. In accordance with the PMP, the results of groundwater monitoring are to be presented in quarterly monitoring reports.

2 METHODS

As outlined in the PMP, Hydraulic Control Monitoring was conducted to evaluate whether the current IRM configuration (*i.e.*, extraction rates and well locations) is achieving the desired capture zone (*i.e.*, hydraulic control), while not exacerbating groundwater contamination conditions. Progress Monitoring was initiated at the conclusion of Hydraulic Control Monitoring for the Perched, USG, and LSG when the capture zones for these units were verified and long-term monitoring/evaluation of changes in COPC concentrations in these units was initiated. Hydraulic Control and Progress Monitoring consists of groundwater level and quality monitoring at locations depicted in Figure 1.

Methods and procedures for groundwater level and quality monitoring were conducted in accordance with the U.S. Environmental Protection Agency (USEPA) approved Sampling and Analysis Plan (SAP) (O'Brien & Gere, 2009) and the PMP.

2.1 GROUNDWATER LEVEL MONITORING

Groundwater level monitoring consisted of manual measurements and variable autonomous measurements (*i.e.*, pressure transducers). Progress monitoring for the Third Quarter 2012 included a reduced number of wells for manual monitoring compared to the initial monitoring; with the frequency of monitoring reduced as outlined in the PMP as summarized in Table 1. Tables 2 and 3 provide a summary of the wells included in hydraulic control and progress monitoring program.

Manual measurements were collected from a total of 36 monitoring wells (as part of Progress Monitoring) completed in the Perched Zone (13 wells), USG (11 wells), and LSG (12 wells) (see Table 1). Measurements were collected in accordance with sample collection SOP S-21 contained in Appendix F of the SAP. Static water levels were recorded at each monitoring well using an electronic water level indicator with a stainless steel probe. Autonomous measurements were collected via pressure transducers installed in a total of 30 monitoring wells completed in the Perched Zone (8 wells), USG (12 wells), and LSG (10 wells). On August 17, 2012, the transducers for monitoring wells AF-10P, AF-13S, and PMW-4D were removed and placed in wells AF-20S, AF-20D, and OSMW-1P for more frequent, autonomous monitoring of groundwater levels in the Perched/USG and USG/LSG communication areas. Monitoring wells AF-10P, AF-13S, and PMW-4D were manually monitored. A HOBO U20 Water Level Logger (Model U20-001-01) was installed in each well using a Teflon-coated wireline. The HOBO U20 logger is constructed of fully-sealed, non-vented, stainless steel housing with a ceramic pressure sensor (0-30 ft range; ± 0.015 ft). The data logger is retrieved from each well to offload water level data using an optical/USB interface. An additional HOBO U20 logger was installed above the static water level in well PMW-6P for the collection of site barometric pressure data to use in barometric compensation of each non-vented transducer via HOBOWare™ software. Manual groundwater level measurements and pressure transducer readings were referenced to monitoring well top-of-casing elevation to generate groundwater elevation data in feet above mean sea level (ft msl), referenced to the North American Vertical Datum of 1988 (NAVD88).

Manual measurements were collected on a quarterly basis and transducers were set to record data every 30 minutes for a total of 48 measurements each day for each of these selected monitoring wells (see Table 1). Transducer data, including barometric data, were downloaded for processing on a quarterly basis. As mentioned above, the barometric data were used for barometric compensation of individual data logger readings to provide accurate groundwater level readings fully compensated for barometric pressure and temperature.

Following barometric compensation of the transducer data via HOBOWare™ software, the groundwater level data were downloaded to spreadsheets for barometric correction to remove lagged groundwater level response caused by barometric changes. Manual measurements were also transferred to spreadsheets for barometric correction prior to further analyses. The groundwater level data were corrected for barometric fluctuations using the computer program BETCO (barometric and earth tide correction) developed by Nathaniel Toll at Sandia Corporation (Sandia National Laboratories, 2005). Manual measurements were corrected for barometric fluctuations using traditional constant barometric efficiency techniques (Hare and Morse, 1997).

2.2 GROUNDWATER QUALITY MONITORING

Groundwater quality samples were collected for VOC analysis from a total of two wells completed in the USG (PMW-3S), and LSG (PMW-3D). Groundwater sampling was performed twice during the Third Quarter 2012 as part of an accelerated monitoring frequency focused on the monitoring of vinyl chloride concentrations in wells PMW-3S/D. Groundwater samples were collected from the monitoring wells in accordance with the protocols and materials/equipment specified in SOPs S-9 and S-12 (Appendix F of the SAP). Samples for VOC analysis were collected using passive diffusion bag samplers (PDBs). Following PDB retrieval and sample collection, *in-situ* field measurements of pH, specific conductance, temperature, DO, and ORP were collected from the midpoint of the well screen in accordance with SOP S-6/S-6A (Appendix F of the SAP). The samples were shipped via overnight courier to TestAmerica, of Buffalo, New York (TestAmerica) for analysis of VOCs by USEPA Method 8260B.

Groundwater influent and effluent samples were collected for VOC analysis at sampling ports located before (influent) and after (effluent) the air stripper unit at the GWTP. The groundwater influent sample port is located at the combined header, just prior to the bag filters and mixing tank, and is representative of a mixture of groundwater extracted from the pumping wells. Influent and effluent samples were collected to provide compliance monitoring for the operating permit for the treatment unit. Influent and effluent samples were collected semi-monthly during the Third Quarter 2012. Groundwater samples were also collected for VOC analysis from each actively pumping extraction well at a sample port located at the extraction well vault. The extraction well samples were collected monthly. Groundwater influent, effluent, and individual extraction well samples were submitted to TestAmerica for analysis of VOCs using USEPA Method 8260B. Procedures involving sample containers, preservation, labeling, chain-of-custody, and shipping were the same as with monitoring well sampling discussed above.

2.3 QUALITY ASSURANCE/QUALITY CONTROL

Field quality control (QC) samples included trip blanks, field duplicates, and matrix spike/matrix spike duplicates (MS/MSDs). These samples were collected in accordance with the site PMP at a frequency of one blind duplicate and MS/MSD per twenty samples and one equipment blank either per day or per twenty samples, whichever was more frequent. One trip blank was submitted for analysis with each cooler containing groundwater samples for VOC analyses. The QC samples were prepared in accordance with Section 4.3 of the SAP, using the frequencies specified in the Quality Assurance Project Plan (QAPP) tables contained in the SAP. Laboratory QA measures are identified in the SAP.

Level A data validation (*i.e.*, data verification) of laboratory results was conducted on samples collected during Third Quarter 2012, in accordance with the procedures outlined in Appendix C of the PMP.

2.4 STATISTICAL ANALYSIS

Statistical methods involving trend analysis and the development of tolerance limits were applied to groundwater level and quality data in accordance with procedures detailed in Appendix B of the PMP. The statistical methods include a two-part *intra-well* strategy using USEPA's unified guidance on statistical analysis at RCRA facilities (USEPA, 2009).

Statistical analysis of groundwater level and quality data was conducted to evaluate stability (steady-state conditions), potential cross-contamination, and remedial progress. Statistical methods were applied to evaluate:

- Vertical cross-contamination via statistical analysis of groundwater level data
- Vertical cross-contamination via statistical analysis of groundwater quality data
- Equilibrium conditions via statistical analysis of groundwater level data
- Assessment of remedial progress/optimization via statistical analysis of extraction well quality data
- Potential off-site cross-contamination via statistical analysis of groundwater quality data.

Details of each statistical method and application are included in Appendix B of the PMP. Statistical analysis of groundwater levels using Methods I and III of Appendix B were modified to improve sensitivity of the statistical analysis and the level of accuracy applied to trigger values. The modification involved replacement of the magnitude of standard error with the magnitude of change in slope for comparison with the estimated margin of error (± 0.2 ft for the vertical gradient comparisons and ± 0.1 ft for the normalized horizontal gradient comparisons). The impact of this modification improves the ability to evaluate significant changes in the vertical hydraulic gradient (Method I) and horizontal hydraulic gradient (Method III).

3 RESULTS

3.1 FIELD OBSERVATIONS

Manual and autonomous groundwater level measurements were collected according to the frequencies outlined in Table 1, transferred to spreadsheets, corrected for barometric changes, and referenced to top-of-casing elevations. A summary of well completion data for wells included in the groundwater IRM monitoring program is provided in Tables 2 and 3 for groundwater level and groundwater quality monitoring, respectively. Due to the frequency of measurements, particularly transducer measurements (*i.e.*, 48 measurements each day), tabulated data are not included in this report. The data are presented in hydrographs and discussed below in Section 4.1. Groundwater elevation contour maps for the Perched Zone, USG and LSG units on July 10, 2012 are presented in Figures 2, 3 and 4, respectively, and are discussed further below in Section 4.1.3.

Field groundwater quality measurements collected during groundwater sampling events are summarized in Table 4. In the USG at PMW-3S, pH ranged from 6.61 to 7.13, DO ranged from 0.93 to 2.29, and ORP measurements ranged from -70.4 mv to -58.5. In the LSG (PMW-3D), pH ranged from 6.97 to 7.37, DO ranged from 0.66 to 1.49, and ORP measurements ranged from -48.6 mv to -64.1.

3.2 ANALYTICAL RESULTS

Groundwater analytical results are summarized on Table 4. VOCs detected above the laboratory reporting limit are provided in this table, in particular, the COPCs found in groundwater consisting of trichloroethene (TCE) and its daughter products *cis*- and *trans*-1,2-dichloroethene (*cis/trans*-1,2-DCE); 1,1-dichloroethene (1,1-DCE); vinyl chloride (VC); and 1,1,1-trichloroethane (1,1,1-TCA) and its daughter product 1,1-dichloroethane (DCA). Laboratory analytical reports for the Third Quarter 2012 are included in Appendix A.

3.2.1 QA/QC

The laboratory analytical results for VOCs underwent data review and verification by O'Brien & Gere in accordance with Appendix C of the PMP. Details of data verification results for the Third Quarter 2012 (July 26, 2012 and September 6, 2012) are included in Appendix B.

In summary, except as noted in Appendix B, (1) chain-of-custody forms are complete, (2) laboratory analysis and preparation are in accordance with the QAPP, (3) blanks/LCS/MS/MSDs are within control limits, (4) reporting limits were met, and (5) the QA frequency is correct.

4 DATA EVALUATION

Groundwater elevation data were used to evaluate the potential for cross-contamination and attainment of equilibrium conditions as well as to estimate the capture zone of each extraction well(s) for comparison of actual and predicted groundwater flow paths and system design. Groundwater quality data were used to assess the pumping risk associated with vertical and/or lateral cross-contamination, as well as to measure remedial progress.

To assist in evaluating groundwater elevation and quality data and trends, the following summary of extraction well pumping rates and durations are provided:

- The Perched Zone extraction system, consisting of four wells (EW-2P, EW-4P, EW-5P, and EW-6P), continued to operate through the Third Quarter 2012. The Perched Zone extraction well flow rates for the Third Quarter 2012 were as follows:
 - » EW-2P: 50 gallons per minute (gpm), reduced on September 12, 2012 to 45 gpm
 - » EW-4P: 35 gpm
 - » EW-5P: 50 gpm
 - » EW-6P: 50 gpm
- Extraction well EW-7S, completed in the USG, continued to operate through the Third Quarter 2012 at a flow rate of 50 gpm
- The LSG extraction wells (EW-3D and EW-8D) continued to operate through the Third Quarter 2012 at a flow rate of 50 gpm for each extraction well.

4.1 GROUNDWATER ELEVATION DATA

Groundwater elevation data were used to create hydrographs and calculate vertical hydraulic gradients between select nested wells for trend and statistical analysis. The results of these analyses were used to evaluate the occurrence of cross-contamination and equilibrium conditions as outlined in the PMP. Groundwater level data were also used to estimate the capture zone of each extraction well system for comparison of actual and predicted groundwater flow paths and system design.

4.1.1 Groundwater Levels and Pumping Influence

Hydrographs for monitoring wells from the Perched Zone, USG, and LSG are included in Appendix C, as presented in Figures C-1 through C-5. Note that minor groundwater level recoveries (*e.g.*, Figure C-1,2,3, and 5 on August 8, 2012 and September 17, 2012) are associated with periods of shutdown of the groundwater recovery and treatment system for maintenance. The following comments are provided:

- The general regional trend of declining groundwater levels continued during the Third Quarter 2012, eventually stabilizing in early September 2012. The rise in water levels during the period of August 8 through August 15, 2012 was due to an equipment failure and repair, resulting in system shut down for that period of time. An additional minor rise in groundwater levels was observed from September 17 through September 20, 2012 due to the system being temporarily shut down for maintenance
- The depression of groundwater levels in the Perched Zone established during the Third and Fourth Quarters 2011 was maintained during the Third Quarter 2012 (Figure C-1). During July, groundwater levels in GM-9P declined and then abruptly recovered and stabilized (Figure C-1). Well GM-9P is an upgradient background well and the cause of this groundwater level fluctuation is not known
- The depression of groundwater levels in the USG established during the First and Second Quarters 2012 was maintained during the Third Quarter 2012 (Figure C-3). A change in groundwater levels in response to the pumping reduction in EW-7S (Figure C-3) is also observed in the LSG (see Figures C-4 and C-5)
- The depression of groundwater levels in the LSG observed during the Third and Fourth Quarters 2011 were maintained during the Third Quarter 2012 (Figures C-4 and C-5).

4.1.2 Vertical Hydraulic Gradients

Hydrographs of select nested wells for the evaluation of vertical hydraulic gradients are included in Appendix D, as presented in Figures D-1 through D-9. Figure D-1 shows background conditions at the GM-9 nested wells. The following comments are provided:

- The regional vertical gradient between the Perched Zone, USG, and LSG is downward. However, in most areas of Perched Zone pumping, the vertical gradient between the Perched Zone and USG is upward due to pumping (see Figure D-3). Similarly, the gradient between the USG and LSG has been upward during operation of EW-7S (see Figures D-4 and D-5) and the reduction in EW-7S pumping rate does not appear to have influenced this gradient reversal. Of note, at the AF-4P/S well cluster, the vertical gradient between the Perched Zone and USG has changed from an upward gradient to a downward gradient (see Figure D-2) likely due to the surficial recharge of the Perched Zone
- In areas of little to no confining layer, groundwater elevations in nested wells were similar to one another and approximated background conditions. For the Perched/USG communication area, see OSMW-1P/S (Figure D-6) and PMW-3P/S (Figure D-7). For the USG/LSG communication area, see AF-9S/D (Figure D-8) in comparison to OSMW-3S/D (Figure D-9).

A summary of statistical analysis of vertical gradients between the water-bearing units is presented in Tables 5 through 7. These tables include summary statistics for the Perched Zone-USG, USG-LSG, and Perched Zone-LSG, respectfully. The following comments are provided:

- In general, the results indicate no significant increasing or decreasing trends, suggesting that flow in the aquifers have reached steady state under pumping conditions
- Exceptions are the results for the AF-12P/S nested series (Table 5). An increased downward vertical gradient at this well series location is due to groundwater levels in the USG and LSG declining at a higher rate than the Perched zone well (*e.g.*, similar to GM-9 series, see Figure D-1, and Table 6). In addition, the vertical hydraulic gradient between the USG and LSG has been reversed (to vertically upward) at this location since startup of EW-7S (see Figure D-5). As a result, the hydraulic gradient data do not indicate a significant positive trend (*e.g.*, increased downward vertical gradient) between the USG and LSG nested well locations (Table 6). Pumping influences and differences in the rate of change in groundwater levels is in part due to the differences in the thickness of lower permeability units separating the water-bearing units. For example, the Lower Confining Unit that separates the USG from the LSG is less than approximately 10 feet thick in this area; whereas the Upper Confining Unit that separates the USG from the overlying Perched zone is approximately 30 feet thick. Hydraulic and chemical conditions will continue to be closely monitored, but at this time, there does not appear to be an indication of vertical cross-contamination
- Similarly, two other exceptions are the OSMW-1S/D and PMW-3S/D nested series (Table 6). An increasing downward vertical gradient at these well series locations is also due to groundwater levels in the LSG declining at a higher rate than the Perched zone well because the later levels in the USG in the OSMW-1S/D and PMW-3S/D nested series locations are similar to the Perched due to the communication area in this area of the site (see Figures D-6 and D-7)
- Hydraulic and chemical conditions will continue to be closely monitored, but at this time, there does not appear to be an indication of vertical cross-contamination (except possibly in the area of PMW-3S/D).

4.1.3 Steady-State and Capture Zone Estimates

Statistical analyses to evaluate steady-state or equilibrium conditions are summarized in Table 8. The following comments are provided:

- The monitoring wells during the Third Quarter 2012 experienced generally decreased water levels related to seasonal fluctuations in groundwater levels as discussed in Section 4.1.1, which resulted in most of the wells indicating a significant negative trend. The water levels also indicate capture areas similar to the Second Quarter 2012 data within the Perched and LSG, and increased capture area compared with Second Quarter 2012 within the USG associated with the declining groundwater levels and continued operation of EW-7S
- The statistical summary of steady-state conditions (Table 8) indicates significant negative trends due to regional decreasing water levels
- Using groundwater elevation data, and correcting for background conditions, the estimated capture zone of the Perched Zone extraction wells is shown in Figure 2. The estimated capture zone approximates the capture zone as designed
- The Perched Zone capture zone and drawdowns are indicative of steady-state conditions.
- Using groundwater elevation data, and correcting for background conditions, the estimated capture zone of the USG extraction well is shown in Figure 3. The estimated capture zone is slightly larger than the capture zone as designed
- The USG capture zone and drawdowns are indicative of steady-state conditions
- Using groundwater elevation data, and correcting for background conditions, the estimated capture zone of the LSG extraction wells is shown in Figure 4. The estimated capture zone is slightly larger than the capture zone as designed, and the capture zone formed by EW-3D appears to be asymmetrical toward the eastern property boundary of the site toward the PMW-3D area. This may be due to variable aquifer properties (*e.g.*, anisotropy and/or lower transmissivity) in this area
- The LSG capture zone and drawdowns are indicative of steady-state conditions.

4.2 GROUNDWATER QUALITY DATA

Groundwater quality data were summarized via time-series analyses for individual and nested monitoring wells. Statistical analyses were also conducted to assess pumping risk associated with vertical and/or lateral cross-contamination.

4.2.1 Monitoring Well Data – Cross Contamination Analyses

Field bioparameters (*e.g.*, DO, ORP and pH) are measured to monitor whether pumping is having a detrimental effect on water quality conditions (*i.e.*, cross-contamination and/or reducing the effectiveness of biodegradation processes). Field measurements of DO, ORP and pH from select monitoring wells (USG and LSG, and nested wells) is summarized in a time-series graph included in Appendix E, as presented on Figure E-1. The more recent increase in DO concentrations and general increase in ORP since IRM start-up will continue to be closely monitored.

Groundwater quality data for total VOCs from select monitoring wells (PMW-3S and PMW-3D) are also summarized in time-series graphs included in Appendix E, as presented on Figure E-2. The following comments are provided:

- Decreasing VOC concentrations in both wells, PMW-3S and PMW-3D, were observed for the Third Quarter 2012 sampling events and will continue to be evaluated. In particular, concentrations of vinyl chloride decreased from 290 µg/l to 170 µg/l (PMW-3S) and 120 µg/l to 80 µg/l (PMW-3D) during the July 2012 to the September 2012 sampling events, respectively.

A statistical summary of intrawell analysis to evaluate the potential for vertical and lateral cross-contamination is presented in Table 9. Statistical analysis of the nested wells sampled (PMW-3S and PMW-3D) for comparison with baseline quality (*i.e.*, TCE-group and TCA-group Upper Tolerance Limits [UTLs]) is summarized. The following comments are provided:

- A trigger of potential vertical cross-contamination was indicated for the samples collected on July 26, 2012 for PMW-3S and for the samples collected on July 26, 2012 and September 6, 2012 for PMW-3D.

Concentrations exceeded the TCE-group trigger (largely due to elevated vinyl chloride concentrations in these wells). These wells will continue to be monitored for changes in TCE-group concentrations at a frequency greater than outlined in the PMP.

4.2.2 Extraction Well and Influent

Groundwater quality data for extraction wells and IRM system influent samples are included in Appendix F, as presented in Figures F-1 through F-9. Total VOC and individual CVOC concentrations for the combined influent from the active extraction wells are shown in Figure F-1. As anticipated, CVOCs are dominated by TCE (and to some extent, TCA) because the majority of pumping is from the Perched Zone unit. Total VOC concentrations over time for individual extraction wells are presented in Figure F-2. Time series plots of individual CVOC constituents for each Perched Zone, USG and LSG extraction well are shown in Figures F-3 through F-9. The following comments are provided:

- The data indicate steady or decreasing concentrations of CVOCs for the extraction wells.

A statistical summary of extraction well and IRM system influent analysis to evaluate the progress of the IRM system is presented in Table 10. As outlined in the PMP, influent concentrations for each extraction well are evaluated statistically (*i.e.*, normal or lognormal distribution; parametric versus non-parametric; seasonal adjustment) to identify stable or decreasing trends in concentrations. The trend analysis assists in evaluating whether continued pumping is beneficial or operational effectiveness may be improved. The following comments are provided:

- The decrease in influent concentrations appears to be predominantly related to the decrease in concentrations in extraction wells EW-4P and EW-5P (see Figures F-4 and F-5, and Table 10), based on the higher mass percentage of TCE and TCA in both EW-4P and EW-5P. The data for EW-4P and EW-5P should continue to be monitored during the Fourth Quarter 2012 to evaluate if the pumping rates of these wells should be adjusted. The flow rate of EW-4P is already at its lower operational range of 35 gpm, which is about as low as it can be operated via its variable frequency drive (VFD)
- CVOC concentrations observed at extraction well EW-7S appear to have stabilized; the recent increase in total VOCs (see Figure F-7) is the result of detections of MEK and acetone
- Concentrations of CVOCs in the LSG extraction wells (EW-3D and EW-8D) are comparable to previous analytical results indicating a steady state conditions.

Progress Monitoring should continue for the Perched Zone, USG and LSG.

5 SUMMARY

Groundwater monitoring during the Third Quarter 2012 consisted of the collection and analysis of groundwater level and quality data to evaluate the occurrence of cross-contamination and significant short-term anomalies. Highlights of this evaluation are summarized as follows:

5.1 IRM-RELATED MONITORING

- In areas of active pumping and observed drawdown (e.g., within approximately 200 to 250 feet of extraction wells), the regional downward vertical gradient between the pumped and underlying water-bearing unit was reversed following startup of pumping. In contrast, the groundwater levels in those nested wells completed in the Perched Zone/USG and USG/LSG communication areas were generally at similar elevations. In these areas, the vertical gradients may periodically reverse direction and will continue to be monitored as outlined in the PMP
- The estimated capture zones in the Perched Zone, USG and LSG approximate, or are greater than, the design capture zone, meeting an objective of the groundwater IRM
- Groundwater level monitoring in the Perched Zone, USG, and LSG during the Third Quarter 2012 indicates steady-state conditions, superimposed upon a seasonal decrease in overall groundwater levels during most of the quarter
- Groundwater quality data is limited to two sampling events for the PMW-3S/D well series. Previously, sampling data for PMW-3S/3D had shown increasing VC concentrations since the end of First Quarter 2012 to the Second Quarter 2012. However, the Third Quarter 2012 results indicate decreasing concentrations of VC at these locations and recent (January 2013) sampling results are being evaluated
- Conclusions from hydrograph and VOC time-series analyses are further supported by statistical analyses, summarized as follows:
 - » **Vertical Cross-Contamination – Hydraulic Data**
 - › *No Apparent Increased Risk of Vertical Cross-Contamination at Present Pumping Rates Based on Available Data (except possibly the area of PMW-3S/D¹)*
 - » **Vertical Cross-Contamination – Chemical Data**
 - › *Results from PMW-3S/D¹ Indicate an Apparent Increased Risk of Vertical Cross-Contamination at Present Pumping Rates Based on Available Data*
 - » **Extraction Well Influent – Chemical Data**
 - › *Continue Pumping/Evaluate EW-4P and EW-5P during the Fourth Quarter 2012 to evaluate IRM system optimization*
 - » **Potential Off-Site Sources – Chemical Data**
 - › *Results from PMW-3S/D¹ Indicate an Apparent Contribution from Potential Off-Site Sources.*

¹ Vinyl chloride increases at PMW-3S/D, coupled with nearby southwesterly groundwater flow direction; suggest potential off-site (to the east) source(s). Recent data collected in November 2012 indicate a near-term stabilization or decrease of concentrations and will be discussed in more detail in the Fourth Quarter 2012 report. Concentration trend and groundwater flow direction will continue to be monitored at an accelerated frequency.

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Tables

GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Location and Frequency of Hydraulic and Chemical Monitoring (3Q-12)

¹ Semi-weekly = every half week; Semi-monthly = every half month; Bi-monthly = every two months
² USEPA Methods 8260B as per QAPP (O'Brien & Gere, 2009)
³ Data Validation - Level A for all sampling, except verification re-sampling at Level B (see Appendix C)
⁴ For a complete list of analytes and frequencies, see Table 10 of the Performance Monitoring Plan (O'Brien & Gere, 2010)
⁵ Monitoring Wells PMW-3S and PMW-3D were the only monitoring wells sampled in the 3rd quarter of 2012.

Additionally, the following semiannual groundwater sampling program wells that are not also part of the PMP sampling program are hydraulically monitored and sampled during the second and fourth quarterly sampling events: AF-2P, AF-3P, AF-5D, AF-21D, AF-23P, AF-24P, AOC LDMW-1S, AOC PSTMW-1SR, AOC PSTMW-2S, H-221, OSMW-2P, OSMW-5S, OSMW-5D, OSMW-6S, OSMW-7D, OSMW-8S, and OSMW-8D

Table 2

GE OHD 000 817 312

GE Aviation Evendale, Ohio - Groundwater IRM

Well Completion Data - Groundwater Level Monitoring

Water-Bearing Zone	Well ID - Groundwater Level Monitoring			Transducer ³	Northing (feet)	Easting (feet)	Ground Surface Elev (ft)	TOC Elevation (ft)	Inner Casing Diameter (inches)	Well Screen				Total Depth (ft bTOC) ⁴
	Hydraulic Control Monitoring	Progress Monitoring ¹	Semiannual Monitoring ²							Top (ft bgs)	Top (ft msl)	Bottom (ft bgs)	Bottom (ft msl)	
Perched														
	AF-2P	AF-2P	AF-2P		456379.19	1418008.71	562.10	563.39	2.00	28.00	534.10	33.00	529.10	34.46
			AF-3P		456297.40	1417884.19	560.40	561.82	2.00	21.00	539.40	31.00	529.40	32.42
	AF-4P	AF-4P		T	456180.93	1417877.42	560.40	561.90	2.00	24.50	535.90	34.50	525.90	36.21
	AF-5P	AF-5P	AF-5P		455882.90	1417831.43	559.80	561.22	2.00	28.00	531.80	33.00	526.80	34.75
	AF-6P	AF-6P			456059.85	1417402.52	559.80	561.68	2.00	27.70	532.10	32.70	527.10	35.34
	AF-7P	AF-7P	AF-7P	T	455478.24	1417577.30	559.80	561.21	2.00	31.50	528.30	36.50	523.30	37.43
	AF-10P	AF-10P		T	456127.64	1416977.53	559.90	561.48	2.00	17.40	542.50	22.40	537.50	23.68
	AF-12P	AF-12P			456295.77	1416183.22	574.20	575.05	2.00	14.50	559.70	19.50	554.70	20.78
	AF-13P	AF-13P			456494.02	1416526.13	565.40	566.82	2.00	35.37	530.03	45.37	520.03	32.45
		AF-14P			456528.73	1416790.19	559.53	558.54	2.00	17.50	542.03	27.50	532.03	28.92
	AF-23P	AF-23P	AF-23P		457010.00	1417595.00	560.00	559.75	2.00	22.88	537.12	32.88	527.12	32.15
	AF-24P		AF-24P		456451.17	1417576.18	559.82	558.89	2.00	26.23	533.59	36.23	523.59	35.40
	AF-25P	AF-25P	AF-25P	T	456074.92	1417500.43	558.40	558.08	2.00	23.27	535.13	33.27	525.13	33.10
	AF-26P				456122.18	1417674.94	558.30	557.78	2.00	30.96	527.34	40.96	517.34	35.44
			AOC LDMW-1S		457924.00	1417429.00	556.20	555.81	2.00	13.29	542.91	23.29	532.91	22.90
			AOC PSTMW-1SR		459022.76	1417784.33	556.91		2.00					
			AOC PSTMW-2S		458993.37	1417998.15	559.90	559.70	2.00	18.50	541.40	28.50	531.40	24.50
	GM-3P				457074.62	1418304.17	559.50	559.24	2.00	19.30	540.20	29.30	530.20	29.3 ⁵
	GM-9P	GM-9P		T	457104.10	1417217.11	560.30	559.95	2.00	18.00	542.30	28.00	532.30	27.65
			H-221		454547.97	1417264.66	554.70	554.37	2.00	20.00	534.70	30.00	524.70	28.65
	OSMW-1P	OSMW-1P	OSMW-1P		455078.23	1417736.02	551.50	554.09	2.00	20.00	531.50	30.00	521.50	32.53
	OSMW-2P	OSMW-2P	OSMW-2P		455601.82	1417822.50	554.80	557.01	2.00	27.00	527.80	37.00	517.80	38.87
	OSMW-10P	OSMW-10P			455020.27	1417400.34	555.82	558.57	2.00	20.00	535.82	30.00	525.82	32.57
	OSMW-11P	OSMW-11P			455459.30	1418006.45	552.04	551.71	2.00	13.00	539.04	23.00	529.04	22.93
	OSMW-12P				455880.25	1418332.91	553.66	553.35	2.00	14.70	538.96	24.70	528.96	24.63
	OW-1P				455883.50	1417685.55	559.42	559.75	2.00	30.00	529.42	35.00	524.42	35 ⁵
	PMW-3P	PMW-3P		T	455249.65	1417470.90	557.41	560.10	2.00	16.00	541.41	26.00	531.41	29.07
	PMW-5P	PMW-5P			1417293.42	455489.81	559.11	558.71	2.00	20.15	538.96	30.15	528.96	29.75
	PMW-6P	PMW-6P		T	1417456.08	455769.69	561.50	561.10	2.00	28.57	532.93	38.57	522.93	38.17
	TMW-1P	TMW-1P		T	455737.69	1417702.75	559.77	562.12	2.00	22.00	537.77	32.00	527.77	33.84
	TMW-2P	TMW-2P			455595.65	1416931.21	556.94	559.71	2.00	28.50	528.44	33.50	523.44	38.45

Table 2

GE OHD 000 817 312

GE Aviation Evendale, Ohio - Groundwater IRM

Well Completion Data - Groundwater Level Monitoring

Water-Bearing Zone	Well ID - Groundwater Level Monitoring			Transducer	Northing (feet)	Easting (feet)	Ground Surface Elev (ft)	TOC Elevation (ft)	Inner Casing Diameter (inches)	Well Screen				Total Depth (ft bTOC) ⁴
	Hydraulic Control Monitoring	Progress Monitoring ¹	Semiannual Monitoring ²							Top (ft bgs)	Top (ft msl)	Bottom (ft bgs)	Bottom (ft msl)	
USG														
	AF-4S	AF-4S		T	456183.67	1417879.81	560.30	562.22	2.00	43.00	517.30	53.00	507.30	54.03
	AF-5S	AF-5S	AF-5S		455887.32	1417833.15	559.60	561.60	2.00	41.00	518.60	51.00	508.60	51.92
	AF-6S	AF-6S			456056.40	1417402.71	560.10	562.67	2.00	41.00	519.10	51.00	509.10	52.80
	AF-7S	AF-7S	AF-7S	T	455482.27	1417577.68	559.70	562.02	2.00	45.00	514.70	55.00	504.70	56.68
	AF-8S				455524.80	1417088.16	559.10	561.08	2.00	50.00	509.10	50.00	499.10	60.00
	AF-9S	AF-9S	AF-9S	T	455790.53	1416793.04	562.00	564.19	2.00	50.00	512.00	60.00	502.00	61.75
	AF-10S	AF-10S			456134.19	1416979.21	559.90	561.98	2.00	61.00	498.90	71.00	488.90	67.75
	AF-11S	AF-11S		T	456094.23	1416577.99	564.70	565.20	2.00	53.00	511.70	63.00	501.70	63.27
	AF-12S	AF-12S			456295.87	1416186.19	574.00	575.41	2.00	64.00	510.00	74.00	500.00	72.31
	AF-13S	AF-13S		T	456488.94	1416522.95	565.20	567.91	2.00	46.50	518.70	56.50	508.70	56.5 ⁵
	AF-14S				456526.22	1416788.87	559.50	558.56	2.00	56.50	503.00	66.50	493.00	66.5 ⁵
	AF-19S	AF-19S		T	455823.23	1417037.78	561.60	563.87	2.00	52.40	509.20	62.40	499.20	64.65
	AF-20S	AF-20S			455927.77	1416940.35	559.80	562.47	2.00	59.00	500.80	69.00	490.80	71.57
	GM-9S	GM-9S		T	457108.81	1417214.23	561.00	560.13	2.00	43.00	518.00	53.00	508.00	52.09
	OSMW-1S	OSMW-1S	OSMW-1S	T	455082.59	1417738.59	551.50	554.14	2.00	41.00	510.50	51.00	500.50	52.84
	OSMW-3S	OSMW-3S	OSMW-3S	T	455309.01	1417107.64	557.10	559.91	2.00	54.00	503.10	64.00	493.10	66.60
	OSMW-4S	OSMW-4S	OSMW-4S	T	456144.10	1416386.57	565.50	565.10	2.00	65.00	500.50	75.00	490.50	75.84
			OSMW-5S		453589.27	1416137.49	576.70	576.44	2.00	63.80	512.90	73.80	502.90	73.54
			OSMW-6S		455149.40	1416267.11	586.61	586.38	2.00	80.00	506.61	90.00	496.61	88.78
			OSMW-8S		454625.51	1415147.34	584.64	584.33	2.00	77.41	507.23	87.41	497.23	86.70
	OSMW-9S	OSMW-9S			455705.63	1415409.73	594.66	594.37	2.00	88.80	505.86	98.80	495.86	101.30
	OSMW-10S	OSMW-10S			455019.93	1417400.39	555.82	558.59	2.00	47.20	508.62	57.20	498.62	58.20
	OSMW-11S	OSMW-11S			455459.42	1418006.57	552.04	551.64	2.00	37.25	514.79	47.25	504.79	47.20
	PMW-3S	PMW-3S		T	455249.82	1417470.89	557.41	560.12	2.00	44.80	512.61	54.80	502.61	57.40
	TMW-1S	TMW-1S	TMW-1S	T	455739.88	1417703.19	559.78	561.63	2.00	48.30	511.48	58.30	501.48	59.75
	TMW-2S	TMW-2S	TMW-2S		455597.25	1416929.92	557.01	560.15	2.00	40.00	517.01	50.00	507.01	53.08

Table 2

GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Well Completion Data - Groundwater Level Monitoring

Water-Bearing Zone	Well ID - Groundwater Level Monitoring			Transducer ³	Northing (feet)	Easting (feet)	Ground Surface Elev (ft)	TOC Elevation (ft)	Inner Casing Diameter (inches)	Well Screen				Total Depth (ft bTOC) ⁴
	Hydraulic Control Monitoring	Progress Monitoring ¹	Semiannual Monitoring ²							Top (ft bgs)	Top (ft msl)	Bottom (ft bgs)	Bottom (ft msl)	
LSG														
	AF-1D				456927.14	1417977.19	559.80	559.78	4.00	108.00	451.80	118.00	441.80	118.00
	AF-5D		AF-5D		455889.87	1417834.37	559.50	561.66	2.00	100.00	459.50	110.00	449.50	108.1
	AF-7D	AF-7D	AF-7D	T	455489.28	1417578.92	559.70	561.23	4.00	109.00	450.70	119.00	440.70	118.77
	AF-8D				455517.69	1417091.88	559.00	560.73	4.00	86.00	473.00	96.00	463.00	93.72
	AF-9D	AF-9D		T	455794.33	1416786.95	562.20	563.93	4.00	78.00	484.20	88.00	474.20	93.30
	AF-11D	AF-11D		T	456087.97	1416583.70	564.90	566.27	4.00	92.00	472.90	102.00	462.90	101.79
	AF-12D	AF-12D			456297.35	1416191.94	573.30	575.45	4.00	102.00	471.30	112.00	461.30	111.85
	AF-15D	AF-15D			456991.44	1416851.88	559.80	560.95	4.00	103.00	456.80	113.00	446.80	112.86
	AF-16D				457003.87	1417280.19	560.40	561.83	4.00	91.00	469.40	101.00	459.40	102.57
	AF-17D	AF-17D			456484.75	1417467.78	560.30	561.37	4.00	90.00	470.30	100.00	460.30	99.48
	AF-19D	AF-19D		T	455818.36	1417039.55	561.70	564.10	2.00	81.20	480.50	91.20	470.50	93.40
	AF-20D	AF-20D			455933.76	1416941.09	559.80	562.52	2.00	81.10	478.70	91.10	468.70	93.56
	AF-21D	AF-21D	AF-21D		455941.03	1416777.12	560.00	559.61	2.00	80.00	480.00	90.00	470.00	90.11
	GM-3D				457163.25	1418266.08	560.80	562.47	4.00	138.00	422.80	148.00	412.80	148.00
	GM-5D				457241.00	1416754.00	562.00	564.07	4.00	126.43	455.57	116.43	445.57	116.75 ⁵
	GM-9D	GM-9D		T	457107.93	1417219.35	561.00	560.06	4.00	100.00	461.00	110.00	451.00	109.30
	H-223	H-223			454519.10	1417253.00	555.00	555.60	2.00	154.50	400.50	164.50	390.50	161.51
	OSMW-1D	OSMW-1D	OSMW-1D	T	455082.67	1417738.40	551.10	554.16	2.00	80.00	471.10	90.00	461.10	92.75
	OSMW-3D	OSMW-3D	OSMW-3D	T	455309.10	1417107.28	557.10	559.91	2.00	131.00	426.10	141.00	416.10	143.31
	OSMW-4D	OSMW-4D	OSMW-4D	T	456143.93	1416386.96	565.50	565.14	2.00	127.00	438.50	137.00	428.50	135.94
			OSMW-5D		452875.51	1416398.42	560.53	560.25	2.00	121.00	439.53	131.00	429.53	130.72
	OSMW-6D	OSMW-6D	OSMW-6D		455147.40	1416265.11	586.38	586.08	2.00	149.77	436.61	159.77	426.61	162.20
	OSMW-7D	OSMW-7D	OSMW-7D		456711.82	1415686.05	592.44	592.09	2.00	141.00	451.44	151.00	441.44	148.80
			OSMW-8D		454625.45	1415147.03	584.64	584.34	2.00	175.30	409.34	185.30	399.34	187.20
	OSMW-9D	OSMW-9D			455705.86	1415409.84	594.66	594.39	2.00	166.00	428.66	176.00	418.66	175.60
	OSMW-10D	OSMW-10D			455020.11	1417400.16	555.82	558.61	2.00	130.00	425.82	140.00	415.82	142.63
	OSMW-11D				455459.26	1418006.71	552.04	551.72	2.00	81.00	471.04	91.00	461.04	90.30
	OSMW-11DD				455459.02	1418006.62	552.04	551.68	2.00	140.00	412.04	150.00	402.04	149.83
	OSMW-12D				455880.20	1418333.14	553.66	553.29	2.00	123.00	430.66	133.00	420.66	133.76
	OSMW-12DD				455880.36	1418333.21	553.66	553.18	2.00	141.00	412.66	151.00	402.66	149.20
	OSMW-13D				455241.33	1417853.92	552.03	551.82	2.00	96.00	456.03	106.00	446.03	103.65
	OSMW-13DD				455241.62	1417854.06	552.03	551.70	2.00	142.00	410.03	152.00	400.03	151.84
	OW-3D				455360.77	1417112.74	557.72	557.43	2.00	135.00	422.72	140.00	417.72	140 ⁵
	OW-4D				455422.91	1417165.94	559.68	559.41	2.00	135.00	424.68	140.00	419.68	140 ⁵
	PMW-2D				456024.30	1417902.40	560.05	562.47	2.00	125.00	435.05	135.00	425.05	139.70
	PMW-3D	PMW-3D		T	455249.80	1417471.07	557.41	560.04	2.00	126.00	431.41	136.00	421.41	139.75
	PMW-4D	PMW-4D		T	456424.32	1416617.44	564.33	567.25	2.00	130.00	434.33	140.00	424.33	142.51
	TMW-1D		TMW-1D		455740.26	1417702.92	559.78	562.02	2.00	94.30	465.48	104.30	455.48	106.45
	TMW-2D	TMW-2D	TMW-2D		455597.15	1416930.07	557.01	559.86	2.00	117.30	439.71	127.30	429.71	129.32

- Notes
- ¹ Third Quarter 2012: Progress Monitoring in the Perched, USG and LSG.
 - ² Semiannual sampling occurs in the second and fourth quarters.
 - ³ T = Transducer; Blank = Manual.
 - ⁴ Total depths from ground surface (GM-3P, OW-1P, AF-13S, AF-14S, GM-5D, OW-3D, OW-4D)

Table 3

GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Well Completion Data - Groundwater Quality Monitoring

Water-Bearing Zone	Well ID - VOC Sampling			Northing (feet)	Easting (feet)	Ground Surface Elev (ft)	TOC Elevation (ft)	Inner Casing Diameter	Well Screen				Total Depth (ft bTOC) ³
	Hydraulic Control Monitoring	Progress Monitoring ^{1,4}	Semiannual Monitoring ²						Top (ft bgs)	Top (ft msl)	Bottom (ft bgs)	Bottom (ft msl)	
Perched													
			AF-2P	456379.19	1418008.71	562.10	563.39	2.00	28.00	534.10	33.00	529.10	34.46
			AF-3P	456297.40	1417884.19	560.40	561.82	2.00	21.00	539.40	31.00	529.40	32.42
	AF-4P	AF-4P		456180.93	1417877.42	560.40	561.90	2.00	24.50	535.90	34.50	525.90	36.21
		AF-5P	AF-5P	455882.90	1417831.43	559.80	561.22	2.00	28.00	531.80	33.00	526.80	34.75
	AF-7P	AF-7P	AF-7P	455478.24	1417577.30	559.80	561.21	2.00	31.50	528.30	36.50	523.30	37.43
	AF-13P	AF-13P		456494.02	1416526.13	565.40	566.82	2.00	3.13	562.27	13.13	552.27	15.4 ³
			AF-23P	457010.00	1417595.00	560.00	559.75	2.00	22.88	537.12	32.88	527.12	32.15
			AF-24P	456451.17	1417576.18	559.82	558.89	2.00	26.23	533.59	36.23	523.59	35.40
	AF-25P	AF-25P	AF-25P	456074.92	1417500.43	558.40	558.08	2.00	23.27	535.13	33.27	525.13	33.10
			AOC LDMW-1S	457924.00	1417429.00	556.20	555.81	2.00	13.29	542.91	23.29	532.91	22.90
			AOC PSTMW-1SR	459022.76	1417784.33	556.91		2.00					
			AOC PSTMW-2S	458993.37	1417998.15	559.90	559.70	2.00	18.50	541.40	28.50	531.40	24.50
			H-221	454547.97	1417264.66	554.70	554.37	2.00	20.00	534.70	30.00	524.70	28.65
		OSMW-1P	OSMW-1P	455078.23	1417736.02	551.50	554.09	2.00	20.00	531.50	30.00	521.50	32.53
			OSMW-2P	455601.82	1417822.50	554.80	557.01	2.00	27.00	527.80	37.00	517.80	38.87
		OSMW-10P		455020.27	1417400.34	555.82	558.57	2.00	20.00	535.82	30.00	525.82	32.57
		OSMW-11P		455459.30	1418006.45	552.04	551.71	2.00	13.00	539.04	23.00	529.04	22.93
		OSMW-12P		455880.25	1418332.91	553.66	553.35	2.00	14.70	538.96	24.70	528.96	24.63
		OSMW-13P		455241.47	1417854.22	552.03	551.75	2.00	22.00	530.03	32.00	520.03	32.45
	PMW-3P	PMW-3P		455249.65	1417470.90	557.41	560.10	2.00	16.00	541.41	26.00	531.41	29.07
	TMW-1P	TMW-1P		455737.69	1417702.75	559.77	562.12	2.00	22.00	537.77	32.00	527.77	33.84
USG													
	AF-4S	AF-4S		456183.67	1417879.81	560.30	562.22	2.00	43.00	517.30	53.00	507.30	54.03
		AF-5S	AF-5S	455887.32	1417833.15	559.60	561.60	2.00	41.00	518.60	51.00	508.60	51.92
	AF-6S	AF-6S		456056.4	1417402.71	560.10	562.67	2.00	41.00	519.10	51.00	509.10	52.80
	AF-7S	AF-7S	AF-7S	455482.27	1417577.68	559.70	562.02	2.00	45.00	514.70	55.00	504.70	56.68
	AF-9S	AF-9S	AF-9S	455790.53	1416793.04	562.00	564.19	2.00	50.00	512.00	60.00	502.00	61.75
	AF-11S	AF-11S		456094.23	1416577.99	564.70	565.20	2.00	53.00	511.70	63.00	501.70	63.27
	AF-13S	AF-13S		456488.94	1416522.95	565.20	567.91	2.00	45.60	519.60	55.60	509.60	55.6 ³
	AF-19S	AF-19S		455823.23	1417037.78	561.60	563.87	2.00	52.40	509.20	62.40	499.20	64.65
	OSMW-1S	OSMW-1S	OSMW-1S	455082.59	1417738.59	551.50	554.14	2.00	41.00	510.50	51.00	500.50	52.84
	OSMW-3S	OSMW-3S	OSMW-3S	455309.01	1417107.64	557.10	559.91	2.00	54.00	503.10	64.00	493.10	66.60
	OSMW-4S	OSMW-4S	OSMW-4S	456144.10	1416386.57	565.50	565.10	2.00	65.00	500.50	75.00	490.50	75.84
			OSMW-5S	453589.27	1416137.49	576.70	576.44	2.00	63.80	512.90	73.80	502.90	73.54
			OSMW-6S	455149.40	1416267.11	586.61	586.38	2.00	80.00	506.61	90.00	496.61	88.78
			OSMW-8S	454625.51	1415147.34	584.64	584.33	2.00	77.41	507.23	87.41	497.23	86.70
		OSMW-9S		455705.63	1415409.73	594.66	594.37	2.00	88.80	505.86	98.80	495.86	101.30
		OSMW-10S		455019.93	1417400.39	555.82	558.59	2.00	47.20	508.62	57.20	498.62	58.20
		OSMW-11S		455459.42	1418006.57	552.04	551.64	2.00	37.25	514.79	47.25	504.79	47.20
	PMW-3S	PMW-3S ⁴		455249.82	1417470.89	557.41	560.12	2.00	44.80	512.61	54.80	502.61	57.40
	TMW-1S	TMW-1S	TMW-1S	455739.88	1417703.19	559.78	561.63	2.00	48.30	511.48	58.30	501.48	59.75
	TMW-2S	TMW-2S	TMW-2S	455597.25	1416929.92	557.01	560.15	2.00	40.00	517.01	50.00	507.01	53.08

Table 3

GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Well Completion Data - Groundwater Quality Monitoring

Water-Bearing Zone	Well ID - VOC Sampling			Northing (feet)	Easting (feet)	Ground Surface Elev (ft)	TOC Elevation (ft)	Inner Casing Diameter	Well Screen				Total Depth (ft bTOC) ³
	Hydraulic Control Monitoring	Progress Monitoring ^{1,4}	Semiannual Monitoring ²						Top (ft bgs)	Top (ft msl)	Bottom (ft bgs)	Bottom (ft msl)	
LSG													
			AF-5D	455889.87	1417834.37	559.50	561.66	2.00	100.00	459.50	110.00	449.50	108.10
	AF-7D	AF-7D	AF-7D	455489.28	1417578.92	559.70	561.23	4.00	109.00	450.70	119.00	440.70	118.77
	AF-9D			455794.33	1416786.95	562.20	563.93	4.00	78.00	484.20	88.00	474.20	93.30
	AF-11D	AF-11D		456087.97	1416583.70	564.90	566.27	4.00	92.00	472.90	102.00	462.90	101.79
	AF-19D	AF-19D		455818.36	1417039.55	561.70	564.10	2.00	81.20	480.50	91.20	470.50	93.40
			AF-21D	455941.03	1416777.12	560.00	559.61	2.00	80.00	480.00	90.00	470.00	90.11
	OSMW-1D	OSMW-1D	OSMW-1D	455082.67	1417738.40	551.10	554.16	2.00	80.00	471.10	90.00	461.10	92.75
	OSMW-3D	OSMW-3D	OSMW-3D	455309.10	1417107.28	557.10	559.91	2.00	131.00	426.10	141.00	416.10	143.31
	OSMW-4D	OSMW-4D	OSMW-4D	456143.93	1416386.96	565.50	565.14	2.00	127.00	438.50	137.00	428.50	135.94
			OSMW-5D	452875.51	1416398.42	560.53	560.25	2.00	121.00	439.53	131.00	429.53	130.72
		OSMW-6D	OSMW-6D	455147.40	1416265.11	586.38	586.08	2.00	149.77	436.61	159.77	426.61	162.20
			OSMW-7D	456711.82	1415686.05	592.44	592.09	2.00	141.00	451.44	151.00	441.44	148.80
			OSMW-8D	454625.45	1415147.03	584.64	584.34	2.00	175.30	409.34	185.30	399.34	187.20
	OSMW-9D	OSMW-9D		455705.86	1415409.84	594.66	594.39	2.00	166.00	428.66	176.00	418.66	175.60
	OSMW-10D	OSMW-10D		455020.11	1417400.16	555.82	558.61	2.00	130.00	425.82	140.00	415.82	142.63
		OSMW-11D		455459.26	1418006.71	552.04	551.72	2.00	81.00	471.04	91.00	461.04	90.30
		PMW-2D		456024.30	1417902.40	560.05	562.47	2.00	125.00	435.05	135.00	425.05	139.70
	PMW-3D	PMW-3D ⁴		455249.80	1417471.07	557.41	560.04	2.00	126.00	431.41	136.00	421.41	139.75
	PMW-4D	PMW-4D		456424.32	1416617.44	564.33	567.25	2.00	130.00	434.33	140.00	424.33	142.51
		TMW-1D	TMW-1D	455740.26	1417702.92	559.78	562.02	2.00	94.30	465.48	104.30	455.48	106.45
	TMW-2D	TMW-2D	TMW-2D	455597.15	1416930.07	557.01	559.86	2.00	117.30	439.71	127.30	429.71	129.32

- Notes
- ¹ Third Quarter 2012: Progress Monitoring in the Perched, USG and LSG.
 - ² Semiannual sampling occurs in the second and fourth quarters.
 - ³ Total depths from ground surface (GM-3P, OW-1P, AF-13S, AF-14S, GM-5D, OW-3D, OW-4D).
 - ⁴ Monitoring Wells PMW-3S and PMW-3D were the only monitoring wells sampled in the 3rd quarter of 2012.

Table 4

GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Groundwater Sampling Results (3Q-12) - Detected Parameters Only

Location Sample Date		PMW-3D			PMW-3S		
		7/26/2012	9/6/2012		7/26/2012	9/6/2012	
FIELD PARAMETERS		units					
pH	S.U.	7.37		6.97		7.13	6.61
Conductivity (mS/cm)	mS/cm	0.619		0.641		0.572	0.68
Turbidity (NTUs)	NTUs	NM		NM		NM	NM
DO (mg/L)	mg/L	0.66		1.49		0.93	2.29
Temperature (° c)	Deg C	14.76		14.68		17.43	17.68
ORP (mV)	mV	-48.6		-64.1		-70.4	-58.5
DETECTABLE VOCs		units					
1,1,1-Trichloroethane	ug/l	66		57		32	23
1,1-Dichloroethane	ug/l	42		28		73	69
1,1-Dichloroethylene	ug/l	3.9	J	2.5	J	2.6	2.0
2-Butanone	ug/l	< 5.3		< 5.3		<2.6	4.0
Acetone	ug/l	12	J	24	J	9.7	J 23
Benzene	ug/l	< 1.6		< 1.6		0.84	J 0.71
cis-1,2-Dichloroethylene	ug/l	35		28		61	63
Trichloroethylene	ug/l	26		23		1.3	J 1.2
Vinyl Chloride	ug/l	290		170		120	80

Notes:

- 1) J = Estimated
- 2) NM = Not Measured
- 3) ** = Equipment malfunction

Table 5

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - Perched to USG

PERCHED -USG STATS.	AF-4	AF-5	AF-7	AF-12	GM-9
Is Slope Less than the Error?	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8
Slope	0.000	0.000	0.000	0.000	0.000
Intercept	-7.6432	-4.6084	-3.8847	-8.0048	-7.9327
Standard Error of Estimates	0.025	0.021	0.020	0.010	0.021
X Variable Coefficient	0.00018600	0.00011111	0.00009397	0.00020818	0.00019425
P-Value	0.174	0.389	0.414	0.013	0.125
Trend Analysis	No Significant Trend	No Significant Trend	No Significant Trend	Significant Positive Trend	No Significant Trend
Magnitude	0.067	0.054	0.059	0.053	0.069
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 5

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - Perched to USG

PERCHED -USG STATS.	OSMW-1	OSMW-10	OSMW-11	PMW-3	TMW-1	TMW-2
Is Slope Less than the Error?	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8
Slope	0.000	0.000	0.000	0.000	0.000	0.000
Intercept	-0.0898	-0.7687	-0.9744	0.4271	-3.1629	-3.8952
Standard Error of Estimates	0.015	0.009	0.014	0.011	0.027	0.021
X Variable Coefficient	0.00000206	0.00001866	0.00003028	-0.00001039	0.00007682	0.00009561
P-Value	0.980	0.735	0.722	0.866	0.611	0.452
Trend Analysis	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend
Magnitude	0.040	0.027	0.038	0.031	0.078	0.066
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 6

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - USG to LSG

USG - LSG STATS.	AF-7	AF-9	AF-11	AF-12
Is the Slope Less than the Error?	YES	YES	YES	YES
Number of Data Points	8	8	8	8
Slope	0.000	0.000	0.000	0.000
Intercept	-3.1451	-0.6693	-0.1842	2.3244
Standard Error of Estimates	0.008	0.006	0.003	0.004
X Variable Coefficient	0.00007743	0.00001631	0.00000442	-0.00005675
P-Value	0.115	0.642	0.784	0.050
Trend Analysis	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend
Magnitude	0.026	0.015	0.008	0.012
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 6

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - USG to LSG

USG - LSG STATS.	AF-19	AF-20	GM-9	OSMW-1
Is the Slope Less than the Error?	YES	YES	YES	YES
Number of Data Points	8	8	8	8
Slope	0.000	0.000	0.000	0.000
Intercept	-0.4297	3.3571	-3.1017	-7.6121
Standard Error of Estimates	0.006	0.010	0.006	0.009
X Variable Coefficient	0.00001057	-0.00008183	0.00007679	0.00018639
P-Value	0.739	0.214	0.042	0.008
Trend Analysis	No Significant Trend	No Significant Trend	Significant Positive Trend	Significant Positive Trend
Magnitude	0.015	0.033	0.022	0.045
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Reduce Pumping Rate
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Reduce Pumping Rate

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 6

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - USG to LSG

USG - LSG STATS.	OSMW-3	OSMW-4	OSMW-10	PMW-3	TMW-2
Is the Slope Less than the Error?	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8
Slope	0.000	0.000	0.000	0.00008	0.000
Intercept	-1.1293	3.6579	-0.6388	-3.4526	0.7092
Standard Error of Estimates	0.004	0.003	0.012	0.005	0.003
X Variable Coefficient	0.00002783	-0.00008778	0.00001606	0.00008475	-0.00001725
P-Value	0.270	0.003	0.814	0.019	0.289
Trend Analysis	No Significant Trend	Significant Negative Trend	No Significant Trend	Significant Positive Trend	No Significant Trend
Magnitude	0.014	0.021	0.036	0.023	0.007
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Reduce Pumping Rate	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 7

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - Perched to LSG

PERCHED - LSG STATS.	AF-7	AF-12	GM-9	OSMW-1
Is Slope Less than Error?	YES	YES	YES	YES
Number of Data Points	8	8	8	8
Slope	0.0000808	0.0000954	0.0001119	0.0001243
Intercept	-3.2937	-3.6072	-4.5457	-5.0797
Standard Error of Estimates	0.010	0.008	0.009	0.010
X Variable Coefficient	0.00008076	0.00009539	0.00011190	0.00012434
P-Value	0.161	0.066	0.067	0.067
Trend Analysis	No Significant Trend	No Significant Trend	No Significant Trend	No Significant Trend
Magnitude	0.024	0.028	0.029	0.033
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 7

GE OHD 000 817 312
 GE Aviation_Evendale, Ohio - Groundwater IRM
 Statistical Summary of Vertical Gradient Analysis - Perched to LSG

PERCHED - LSG STATS.	OSMW-10	PMW-3	TMW-2
Is Slope Less than Error?	YES	YES	YES
Number of Data Points	8	8	8
Slope	0.0000167	0.0000598	-0.0000027
Intercept	-0.6709	-2.4368	0.1175
Standard Error of Estimates	0.010	0.006	0.004
X Variable Coefficient	0.00001671	0.00005984	-0.00000274
P-Value	0.774	0.117	0.914
Trend Analysis	No Significant Trend	No Significant Trend	No Significant Trend
Magnitude	0.031	0.018	0.013
Summary (0.5 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring
Summary (0.2 ft change in water level during monitoring period)	Continue Monitoring	Continue Monitoring	Continue Monitoring

Note:

a positive trend indicates an increased downward vertical gradient

a negative trend indicates an increased upward vertical gradient

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-4P		AF-4S		AF-5P		AF-5S	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.005	-0.005	-0.010	-0.010	-0.008	-0.008	-0.009	-0.009
Intercept	762.2745	762.2745	938.7328	938.7328	852.2735	866.2294	903.4358	896.2027
Standard Error of Estimates	0.231	0.206	0.248	0.087	0.280	0.200	0.314	0.144
Background Standard Error of Estimates								
X Variable Coefficient	-0.00542904		-0.00972346		-0.00799954		-0.00871268	
P-Value	0.003		0.000		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	1.271		2.131		1.774		1.545	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-6P		AF-7P		AF-7S		AF-7D	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.008	-0.008	-0.007	-0.007	-0.008	-0.008	-0.013	-0.013
Intercept	853.2114	867.1673	819.6990	819.6990	882.2427	882.2427	1083.5261	1083.5261
Standard Error of Estimates	0.254	0.180	0.311	0.278	0.244	0.166	0.485	0.108
Background Standard Error of Estimates								
X Variable Coefficient	-0.00799185		-0.00687828		-0.00839112		-0.01334689	
P-Value	0.000		0.003		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	1.716		1.626		2.030		2.716	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-8S		AF-9S		AF-9D		AF-10P	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.010	-0.010	-0.015	-0.015	-0.015	-0.015	-0.007	-0.008
Intercept	963.2237	955.9906	1148.3972	1148.3972	1167.0047	1167.0047	832.9446	869.0136
Standard Error of Estimates	0.280	0.110	0.409	0.172	0.412	0.114	0.326	0.246
Background Standard Error of Estimates								
X Variable Coefficient	-0.01023846		-0.01493343		-0.01538694		-0.00801792	
P-Value	0.000		0.000		0.000		0.002	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	1.824		3.143		3.252		1.340	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-10S		AF-11S		AF-11D		AF-12P	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.011	-0.011	-0.014	-0.014	-0.014	-0.014	-0.001	-0.002
Intercept	1005.8426	998.6096	1121.8816	1121.8816	1129.0291	1129.0291	613.2016	627.1575
Standard Error of Estimates	0.395	0.165	0.430	0.226	0.377	0.197	0.149	0.170
Background Standard Error of Estimates								
X Variable Coefficient	-0.01127314		-0.01429302		-0.01446436		-0.00155915	
P-Value	0.000		0.000		0.000		0.157	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		No Significant Trend	
Magnitude	2.202		3.137		3.190		0.550	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		STABLE	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-12S		AF-12D		AF-13S		AF-19S	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.012	-0.011	-0.012	-0.014	-0.013	-0.013	-0.015	-0.015
Intercept	1009.8638	1002.6308	1012.4450	1097.7487	1079.3402	1060.5998	1141.7155	1141.7155
Standard Error of Estimates	0.364	0.165	0.372	0.058	0.385	0.214	0.365	0.134
Background Standard Error of Estimates								
X Variable Coefficient	-0.01139504		-0.01370812		-0.01278977		-0.01475984	
P-Value	0.000		0.000		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	2.172		2.479		2.348		3.079	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	AF-19D		AF-20S		AF-20D		GM-9P	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.015	-0.015	-0.011	-0.011	-0.012	-0.014	-0.005	-0.005
Intercept	1154.0477	1154.0477	1000.4365	993.2034	1018.7808	1104.0845	742.9691	742.9691
Standard Error of Estimates	0.385	0.155	0.420	0.196	0.427	0.186	0.114	0.109
Background Standard Error of Estimates								
X Variable Coefficient	-0.01506326		-0.01114834		-0.01384907		-0.00491250	
P-Value	0.000		0.000		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	3.292		2.198		2.488		1.002	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	GM-9S		GM-9D		OSMW-1P		OSMW-1S	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	Stable	YES	Stable	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.010	-0.010	-0.014	-0.014	-0.007	-0.007	-0.007	-0.007
Intercept	935.7341	935.7341	1112.5309	1112.5309	833.6106	833.6106	835.4332	835.4332
Standard Error of Estimates	0.303	0.280	0.430	0.399	0.185	0.121	0.220	0.130
Background Standard Error of Estimates								
X Variable Coefficient	-0.00963281		-0.01400983		-0.00720746		-0.00724928	
P-Value	0.000		0.000		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	1.965		2.858		1.451		1.707	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	OSMW-1D		OSMW-3S		OSMW-3D		OSMW-4S	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.015	-0.015	-0.011	-0.011	-0.013	-0.013	-0.017	-0.017
Intercept	1139.9186	1139.9186	991.0272	991.0272	1077.9849	1077.9849	1242.8351	1242.8351
Standard Error of Estimates	0.406	0.159	0.287	0.057	0.468	0.205	0.446	0.240
Background Standard Error of Estimates								
X Variable Coefficient	-0.01470501		-0.01107928		-0.01322217		-0.01725003	
P-Value	0.000		0.000		0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	3.233		2.341		3.084		3.635	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	OSMW-4D		OSMW-10P		OSMW-10S		OSMW-10D	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.016	-0.016	-0.008	-0.008	-0.008	-0.008	-0.011	-0.013
Intercept	1199.2587	1199.2587	853.1193	867.0752	852.8382	845.6051	998.2676	1083.5713
Standard Error of Estimates	0.480	0.175	0.220	0.187	0.218	0.165	0.847	0.726
Background Standard Error of Estimates								
X Variable Coefficient	-0.01618188		-0.00802949		-0.00750586		-0.01334498	
P-Value	0.000		0.000		0.000		0.017	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	3.545		1.852		1.382		3.127	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	OSMW-11P		OSMW-11S		PMW-3P		PMW-3S	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.008	-0.009	-0.008	-0.008	-0.008	-0.008	-0.007	-0.007
Intercept	883.2199	897.1758	885.7098	878.4767	847.3357	847.3357	835.0351	835.0351
Standard Error of Estimates	0.228	0.161	0.216	0.209	0.236	0.270	0.263	0.065
Background Standard Error of Estimates								
X Variable Coefficient	-0.00858247		-0.00828707		-0.00753825		-0.00723909	
P-Value	0.000		0.000		0.002		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	1.607		1.482		1.856		1.561	
Summary ³	Decreasing water levels		Decreasing water levels		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	PMW-3D		TMW-1P		TMW-1S		TMW-2P	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES	YES	YES	YES	YES
Number of Data Points	8	8	8	8	8	8	8	8
Slope	-0.014	-0.019	-0.007	-0.007	-0.009	-0.009	-0.010	-0.011
Intercept	1115.3872	1317.3878	822.3987	822.3987	905.5835	905.5835	958.2265	972.1824
Standard Error of Estimates	0.466	0.570	0.810	0.828	0.350	0.209	0.357	0.338
Background Standard Error of Estimates								
X Variable Coefficient	-0.01903683		-0.00691203		-0.00893227		-0.01063167	
P-Value	0.001		0.166		0.000		0.001	
Trend Analysis ²	Significant Negative Trend		No Significant Trend		Significant Negative Trend		Significant Negative Trend	
Magnitude	4.024		2.927		2.158		2.431	
Summary ³	Decreasing water levels		STABLE		Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;
STABLE - Magnitude < 0.1 feet

Table 8

GE OHD 000 817 312
GE Aviation_Evendale, Ohio - Groundwater IRM
Statistical Summary of Steady-State Analysis

Groundwater Level Statistics	TMW-2S		TMW-2D	
	Individual Well Data	Normalized to Background (GM-9 series)	Individual Well Data	Normalized to Background (GM-9 series)
Does Well Satisfy Steady State Condition? ¹	YES	YES	YES	YES
Number of Data Points	8	8	8	8
Slope	-0.011	-0.011	-0.012	-0.014
Intercept	981.4430	974.2100	1019.1558	1104.4595
Standard Error of Estimates	0.340	0.118	0.358	0.091
Background Standard Error of Estimates				
X Variable Coefficient	-0.01069034		-0.01386627	
P-Value	0.000		0.000	
Trend Analysis ²	Significant Negative Trend		Significant Negative Trend	
Magnitude	1.971		2.436	
Summary ³	Decreasing water levels		Decreasing water levels	

Note: a positive trend indicates increasing groundwater elevations
a negative trend indicates decreasing groundwater elevations

¹Steady-state (stable) = slope less than error

²Significant trend identified by $P \leq 0.05$ (95% confidence)

³Increasing/decreasing water levels if $P \leq 0.05$ and Magnitude > 0.1 feet;

STABLE - Magnitude < 0.1 feet

Table 9
GE OHD 000 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Groundwater Chemical Cross Contamination Analyses

			7/26/2012				9/6/2012			
Well ID	TCA_grp UTL Value ¹ (μmol/L)	TCE_grp UTL Value ¹ (μmol/L)	TCA Group Values (μmol/L)	TCE Group Values (μmol/L)	TCA Group Comparison	TCE Group Comparison	TCA Group Values (μmol/L)	TCE Group Values (μmol/L)	TCA Group Comparison	TCE Group Comparison
PMW-3D	3.1451	2.5338	0.96	5.20	ACCEPT	REJECT	0.74	3.18	ACCEPT	REJECT
PMW-3S	2.3156	2.3051	1.00	2.56	ACCEPT	REJECT	0.89	1.94	ACCEPT	ACCEPT

Footnotes:

1. The methodology for calculating the upper tolerance limit (UTL) is included in the Performance Monitoring Plan.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-2P Sample Date and Result	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	2/7/2012	150.0	2/7/2012	10.0	2/7/2012	9.1	no data		2/7/2012	19.0	9/26/2011	2.0	8/23/2011	2.7	2/7/2012	400.0	1/16/2012	11.0	2/7/2012	1.32	2/7/2012	3.36
	3/5/2012	130.0	3/5/2012	10.0	3/5/2012	4.7	no data		3/5/2012	19.0	10/10/2011	2.1	9/6/2011	2.8	3/5/2012	360.0	2/7/2012	8.4	3/5/2012	1.12	3/5/2012	3.04
	4/2/2012	130.0	4/2/2012	12.0	4/2/2012	6.3	no data		4/2/2012	22.0	10/17/2011	2.1	9/26/2011	2.1	4/2/2012	350.0	3/5/2012	7.2	4/2/2012	1.16	4/2/2012	3.05
	5/1/2012	130.0	5/1/2012	13.0	5/1/2012	10.0	no data		5/1/2012	21.0	10/31/2011	2.6	10/10/2011	2.1	5/1/2012	380.0	4/2/2012	10.0	5/1/2012	1.21	5/1/2012	3.24
	6/1/2012	120.0	6/1/2012	12.0	6/1/2012	8.9	no data		6/1/2012	19.0	11/28/2011	1.8	10/17/2011	2.0	6/1/2012	330.0	5/1/2012	9.1	6/1/2012	1.11	6/1/2012	2.83
	7/2/2012	140.0	7/2/2012	13.0	7/2/2012	14.0	no data		7/2/2012	21.0	12/12/2011	2.0	10/31/2011	1.9	7/2/2012	350.0	6/1/2012	8.3	7/2/2012	1.33	7/2/2012	3.01
	8/1/2012	140.0	8/1/2012	16.0	8/1/2012	4.8	no data		8/1/2012	21.0	4/2/2012	2.1	11/28/2011	1.6	8/1/2012	350.0	7/2/2012	8.7	8/1/2012	1.59	8/1/2012	2.87
	9/4/2012	120.0	9/4/2012	15.0	9/4/2012	11.0	no data		9/4/2012	20.0	7/2/2012	2.2	12/12/2011	1.6	9/4/2012	340.0	9/4/2012	9.7	9/4/2012	1.16	9/4/2012	0.37
Chemical Statistics																						
1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴		
Does the Well Satisfy a Steady State Condition? ¹	YES		YES		YES		#DIV/0!		YES		YES		YES		YES		YES		YES		YES	
Number of Data Points	8		8		8		0		8		8		8		8		8		8		8	
Slope	-0.055		0.027		0.014		#DIV/0!		0.005		0.000		-0.011		-0.204		-0.001		0.001		-0.009	
Intercept	2381.9356		-1077.8192		-583.1271		#DIV/0!		-165.5054		-4.1167		453.1780		8750.0876		45.1885		-25.3431		375.6547	
Standard Error of Estimates	10.304		0.942		3.275		#DIV/0!		1.206		0.247		0.156		18.154		1.267		0.163		0.754	
X Variable Coefficient	-0.05480031		0.02656519		0.01441554		Insufficient Data		0.00452534		0.00015231		-0.01104730		-0.20445860		-0.00088093		0.00064786		-0.00908531	
P-Value	0.342		0.002		0.426		Insufficient Data		0.494		0.877		0.000		0.072		0.891		0.470		0.058	
Trend Analysis ²	No Significant Trend		Significant Positive Trend		No Significant Trend		Insufficient Data		No Significant Trend		No Significant Trend		Significant Negative Trend		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend	
Trend Analysis Result ³	Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping	

Notes:

- 1 - Steady-state (stable) = slope less than error
- 2 - Significant trend identified by P<0.05 (95% confidence; a positive trend indicates increasing chemical concentrations; a negative trend indicates decreasing chemical concentrations)
- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
- 'DCE' - Dichloroethene.
- 'PCE' - Tetrachloroethene.
- 'TCE' - Trichloroethene.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-4P	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	2/7/2012	200.0	2/7/2012	14.0	2/7/2012	12.0	no data		2/7/2012	13.0	no data		7/25/2011	1.9	2/7/2012	420.0	no data		2/7/2012	1.76	2/7/2012	3.32
	3/5/2012	140.0	3/5/2012	15.0	3/5/2012	5.9	no data		3/5/2012	16.0	no data		8/8/2011	2.2	3/5/2012	320.0	7/25/2011	3.5	3/5/2012	1.33	3/5/2012	2.59
	4/2/2012	160.0	4/2/2012	9.8	4/2/2012	6.3	no data		4/2/2012	10.0	no data		8/23/2011	1.3	4/2/2012	340.0	8/8/2011	4.5	4/2/2012	1.36	4/2/2012	2.68
	5/1/2012	180.0	5/1/2012	10.0	5/1/2012	9.9	8/23/2011	0.87	5/1/2012	8.1	no data		9/26/2011	1.5	5/1/2012	400.0	8/23/2011	2.0	5/1/2012	1.55	5/1/2012	3.11
	6/1/2012	150.0	6/1/2012	9.4	6/1/2012	10.0	9/26/2011	1.3	6/1/2012	6.2	no data		10/10/2011	1.8	6/1/2012	350.0	9/26/2011	2.0	6/1/2012	1.32	6/1/2012	2.72
	7/2/2012	150.0	7/2/2012	8.7	7/2/2012	11.0	10/10/2011	1.1	7/2/2012	5.3	no data		10/17/2011	1.9	7/2/2012	340.0	10/10/2011	2.0	7/2/2012	1.33	7/2/2012	2.63
	8/1/2012	150.0	8/1/2012	11.0	8/1/2012	3.7	10/17/2011	1.4	8/1/2012	6.5	no data		10/31/2011	1.7	8/1/2012	330.0	10/17/2011	1.6	8/1/2012	1.27	8/1/2012	2.57
	9/4/2012	110.0	9/4/2012	9.8	9/4/2012	6.0	3/5/2012	4.7	9/4/2012	4.6	10/31/2011	0.63	12/12/2011	1.4	9/4/2012	300.0	10/31/2011	0.96	9/4/2012	0.99	9/4/2012	2.32
Sample Date and Result	Chemical Statistics																					
	1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴	
Does the Well Satisfy a Steady State Condition? ¹	YES		YES		YES		YES		YES		#DIV/0!		YES		YES		YES		YES		YES	
Number of Data Points	8		8		8		5		8		1		8		8		7		8		8	
Slope	-0.256		-0.021		-0.015		0.021		-0.048		#DIV/0!		-0.003		-0.335		-0.027		-0.002		-0.003	
Intercept	10674.9379		863.8230		640.1210		-847.8849		1994.3020		#DIV/0!		110.9911		14105.2655		1117.3791		101.2805		127.4609	
Standard Error of Estimates	20.529		1.847		2.983		0.357		2.051		#DIV/0!		0.294		34.581		0.694		0.146		0.248	
X Variable Coefficient	-0.25628473		-0.02077722		-0.01539717		Insufficient Data		-0.04837255		Insufficient Data		-0.00267760		-0.33510316		Insufficient Data		-0.00243411		-0.00303837	
P-Value	0.052		0.072		0.355		Insufficient Data		0.004		Insufficient Data		0.303		0.109		Insufficient Data		0.018		0.055	
Trend Analysis ²	No Significant Trend		No Significant Trend		No Significant Trend		Insufficient Data		Significant Negative Trend		Insufficient Data		No Significant Trend		No Significant Trend		Insufficient Data		Significant Negative Trend		No Significant Trend	
Trend Analysis Result ³	Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping	

Notes:

- 1 - Steady-state (stable) = slope less than error
- 2 - Significant trend identified by P<0.05 (95% confidence; a positive trend indicates increasing chemical concentrations; a negative trend indicates decreasing chemical concentrations)
- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
- 'DCE' - Dichloroethene.
- 'PCE' - Tetrachloroethene.
- 'TCE' - Trichloroethene.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-5P	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	2/7/2012	170.0	2/7/2012	17.0	2/7/2012	11.0	10/17/2011	4.9	2/7/2012	15.0	no data		8/8/2011	2.3	2/7/2012	370.0	8/23/2011	5.5	2/7/2012	1.68	2/7/2012	2.96
	3/5/2012	160.0	3/5/2012	11.0	3/5/2012	6.3	10/31/2011	3.0	3/5/2012	9.2	8/23/2011	0.51	8/23/2011	1.9	3/5/2012	370.0	9/6/2011	5.4	3/5/2012	1.38	3/5/2012	2.9
	4/2/2012	160.0	4/2/2012	17.0	4/2/2012	8.1	11/14/2011	5.1	4/2/2012	18.0	9/6/2011	0.47	9/6/2011	2.2	4/2/2012	330.0	9/26/2011	6.4	4/2/2012	1.45	4/2/2012	2.69
	5/1/2012	150.0	5/1/2012	15.0	5/1/2012	10.0	11/28/2011	5.0	5/1/2012	17.0	10/10/2011	0.48	9/26/2011	1.8	5/1/2012	340.0	10/10/2011	5.3	5/1/2012	1.41	5/1/2012	2.75
	6/1/2012	130.0	6/1/2012	13.0	6/1/2012	9.9	12/12/2011	4.6	6/1/2012	15.0	10/17/2011	0.47	10/10/2011	1.6	6/1/2012	290.0	10/17/2011	5.2	6/1/2012	1.21	6/1/2012	2.35
	7/2/2012	140.0	7/2/2012	12.0	7/2/2012	12.0	1/16/2012	8.5	7/2/2012	15.0	10/31/2011	0.9	10/17/2011	1.6	7/2/2012	300.0	10/31/2011	4.2	7/2/2012	1.29	7/2/2012	2.47
	8/1/2012	150.0	8/1/2012	13.0	8/1/2012	4.6	2/7/2012	8.0	8/1/2012	18.0	12/12/2011	0.61	10/31/2011	1.5	8/1/2012	300.0	11/28/2011	5.0	8/1/2012	1.3	8/1/2012	2.46
	9/4/2012	120.0	9/4/2012	12.0	9/4/2012	19.0	5/1/2012	2.3	9/4/2012	16.0	7/2/2012	0.77	12/12/2011	1.1	9/4/2012	270.0	12/12/2011	3.7	9/4/2012	1.22	9/4/2012	2.21
Sample Date and Result	Chemical Statistics																					
	1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴	
Does the Well Satisfy a Steady State Condition? ¹	YES		YES		YES		YES		YES		YES		YES		YES		YES		YES		YES	
Number of Data Points	8		8		8		8		8		7		8		8		8		8		8	
Slope	-0.191		-0.017		0.025		-0.001		0.016		0.001		-0.009		-0.473		-0.015		-0.002		-0.003	
Intercept	7995.3264		701.0751		-996.1627		26.4504		-626.1958		-35.2759		374.5919		19727.3744		634.4108		71.1648		140.9683	
Standard Error of Estimates	9.788		2.119		4.277		2.326		2.774		0.157		0.129		14.597		0.623		0.099		0.108	
X Variable Coefficient	-0.19118725		-0.01674448		0.02451468		-0.00052017		0.01563043		Insufficient Data		-0.00913436		-0.47276829		-0.01541269		-0.00170035		-0.00337094	
P-Value	0.009		0.176		0.309		0.971		0.316		Insufficient Data		0.000		0.001		0.046		0.016		0.001	
Trend Analysis ²	Significant Negative Trend		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend		Insufficient Data		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend		Significant Negative Trend	
Trend Analysis Result ³	Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Evaluate System Optimization		Evaluate System Optimization		Evaluate System Optimization		Evaluate System Optimization	

Notes:

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- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
- 'DCE' - Dichloroethene.
- 'PCE' - Tetrachloroethene.
- 'TCE' - Trichloroethene.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-6P Sample Date and Result	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	2/7/2012	69.0	2/7/2012	6.0	2/7/2012	4.1	no data		2/7/2012	12.0	9/26/2011	1.1	7/25/2011	2.2	2/7/2012	210.0	9/26/2011	3.8	2/7/2012	0.62	2/7/2012	1.72
	3/5/2012	64.0	3/5/2012	6.1	3/5/2012	3.1	no data		3/5/2012	11.0	10/10/2011	1.3	8/8/2011	2.4	3/5/2012	200.0	10/10/2011	4.8	3/5/2012	0.57	3/5/2012	1.63
	4/2/2012	57.0	4/2/2012	6.0	4/2/2012	3.2	no data		4/2/2012	11.0	10/17/2011	1.7	8/23/2011	1.2	4/2/2012	170.0	10/17/2011	4.1	4/2/2012	0.52	4/2/2012	1.44
	5/1/2012	71.0	5/1/2012	7.6	5/1/2012	5.4	no data		5/1/2012	13.0	10/31/2011	1.7	9/6/2011	1.8	5/1/2012	210.0	10/31/2011	4.1	5/1/2012	0.66	5/1/2012	1.73
	6/1/2012	65.0	6/1/2012	7.1	6/1/2012	5.4	no data		6/1/2012	12.0	11/28/2011	1.3	9/26/2011	1.5	6/1/2012	200.0	11/14/2011	6.0	6/1/2012	0.61	6/1/2012	1.64
	7/2/2012	66.0	7/2/2012	7.3	7/2/2012	3.9	no data		7/2/2012	13.0	12/12/2011	1.2	10/10/2011	1.6	7/2/2012	200.0	11/28/2011	4.4	7/2/2012	0.61	7/2/2012	1.65
	8/1/2012	77.0	8/1/2012	8.1	8/1/2012	2.8	no data		8/1/2012	13.0	4/2/2012	1.1	10/31/2011	1.8	8/1/2012	200.0	12/12/2011	3.5	8/1/2012	0.69	8/1/2012	1.65
	9/4/2012	60.0	9/4/2012	7.2	9/4/2012	3.0	no data		9/4/2012	12.0	7/2/2012	1.4	12/12/2011	1.6	9/4/2012	190.0	4/2/2012	2.1	9/4/2012	0.55	9/4/2012	1.57
Chemical Statistics																						
1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴		
Does the Well Satisfy a Steady State Condition? ¹	YES		YES		YES		#DIV/0!		YES		YES		YES		YES		YES		YES		YES	
Number of Data Points	8		8		8		0		8		8		8		8		8		8		8	
Slope	0.009		0.009		-0.003		#DIV/0!		0.006		0.000		-0.004		-0.023		-0.012		0.000		0.000	
Intercept	-292.4736		-344.6232		127.2941		#DIV/0!		-229.8000		18.7944		147.6565		1153.8110		501.7573		-4.3618		7.4235	
Standard Error of Estimates	6.758		0.535		1.106		#DIV/0!		0.771		0.254		0.376		13.721		0.908		0.059		0.096	
X Variable Coefficient	0.00873611		0.00856435		-0.00300702		Insufficient Data		0.00589373		-0.00042654		-0.00357522		-0.02329746		-0.01217717		0.00012101		-0.00014119	
P-Value	0.810		0.021		0.617		Insufficient Data		0.189		0.676		0.287		0.753		0.079		0.705		0.785	
Trend Analysis ²	No Significant Trend		Significant Positive Trend		No Significant Trend		Insufficient Data		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend		No Significant Trend	
Trend Analysis Result ³	Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping	

Notes:

- 1 - Steady-state (stable) = slope less than error
- 2 - Significant trend identified by P<0.05 (95% confidence; a positive trend indicates increasing chemical concentrations; a negative trend indicates decreasing chemical concentrations)
- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
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- 'PCE' - Tetrachloroethene.
- 'TCE' - Trichloroethene.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-7S	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	no data		2/7/2012	1.2	11/28/2011	0.89	no data		2/7/2012	110.0	no data		no data		no data		2/7/2012	67.0	2/7/2012	0.02	2/7/2012	2.21
	no data		3/5/2012	1.2	12/12/2011	0.98	no data		3/5/2012	100.0	no data		no data		no data		3/5/2012	56.0	3/5/2012	0.01	3/5/2012	1.93
	no data		4/2/2012	1.3	2/7/2012	0.84	no data		4/2/2012	100.0	no data		no data		no data		4/2/2012	65.0	4/2/2012	0.02	4/2/2012	2.07
	no data		5/1/2012	1.3	4/2/2012	1.1	no data		5/1/2012	95.0	no data		no data		no data		5/1/2012	66.0	5/1/2012	0.01	5/1/2012	2.04
	no data		6/1/2012	1.2	6/1/2012	0.56	no data		6/1/2012	84.0	no data		no data		no data		6/1/2012	70.0	6/1/2012	0.02	6/1/2012	1.99
	no data		7/2/2012	1.2	7/2/2012	0.43	no data		7/2/2012	79.0	no data		no data		no data		7/2/2012	70.0	7/2/2012	0.02	7/2/2012	1.93
	no data		8/1/2012	1.3	8/1/2012	0.77	no data		8/1/2012	79.0	no data		no data		no data		8/1/2012	74.0	8/1/2012	0.02	8/1/2012	2.0
	no data		9/4/2012	1.1	9/4/2012	0.41	no data		9/4/2012	76.0	no data		12/12/2011	1.3	no data		9/4/2012	71.0	9/4/2012	0.02	9/4/2012	1.92
	Chemical Statistics																					
	1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴	
	#DIV/0!		YES		YES		#DIV/0!		YES		#DIV/0!		#DIV/0!		#DIV/0!		YES		YES		YES	
Does the Well Satisfy a Steady State Condition? ¹	0		8		8		0		8		0		1		0		8		8		8	
Number of Data Points	#DIV/0!		0.000		-0.002		#DIV/0!		-0.165		#DIV/0!		#DIV/0!		#DIV/0!		0.055		0.000		-0.001	
Slope	#DIV/0!		11.9158		72.1313		#DIV/0!		6877.6755		#DIV/0!		#DIV/0!		#DIV/0!		-2173.5349		0.2199		36.1628	
Intercept	#DIV/0!		0.074		0.190		#DIV/0!		3.392		#DIV/0!		#DIV/0!		#DIV/0!		3.994		0.005		0.080	
Standard Error of Estimates	Insufficient Data		-0.00026045		-0.00174031		Insufficient Data		-0.16535095		Insufficient Data		Insufficient Data		Insufficient Data		0.05459263		-0.00000493		-0.00083202	
X Variable Coefficient	Insufficient Data		0.518		0.041		Insufficient Data		0.000		Insufficient Data		Insufficient Data		Insufficient Data		0.038		0.841		0.090	
P-Value	Insufficient Data		No Significant Trend		Significant Negative Trend		Insufficient Data		Significant Negative Trend		Insufficient Data		Insufficient Data		Insufficient Data		Significant Positive Trend		No Significant Trend		No Significant Trend	
Trend Analysis ²	Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping	
Trend Analysis Result ³																						

Notes:

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- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
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Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-3D Sample Date and Result	Chemical Data																					
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L	
	no data		no data		no data		no data		2/7/2012	260.0	no data		2/7/2012	53.0	2/7/2012	260.0	1/16/2012	4.5	no data		2/7/2012	5.27
	no data		no data		no data		no data		3/5/2012	240.0	no data		3/5/2012	53.0	3/5/2012	270.0	2/7/2012	4.3	no data		3/5/2012	5.13
	no data		9/26/2011	2.4	no data		no data		4/2/2012	290.0	no data		4/2/2012	60.0	4/2/2012	310.0	3/5/2012	3.6	9/26/2011	0.03	4/2/2012	6.03
	no data		10/10/2011	1.9	9/26/2011	1.0	no data		5/1/2012	260.0	no data		5/1/2012	56.0	5/1/2012	300.0	4/2/2012	4.5	10/10/2011	0.03	5/1/2012	5.6
	no data		10/17/2011	1.7	10/10/2011	0.85	no data		6/1/2012	250.0	no data		6/1/2012	54.0	6/1/2012	290.0	5/1/2012	4.1	10/17/2011	0.02	6/1/2012	5.4
	no data		10/31/2011	1.6	10/17/2011	0.66	no data		7/2/2012	240.0	no data		7/2/2012	51.0	7/2/2012	290.0	6/1/2012	4.3	10/31/2011	0.02	7/2/2012	5.27
	no data		11/28/2011	1.6	10/31/2011	0.77	no data		8/1/2012	240.0	no data		8/1/2012	52.0	8/1/2012	290.0	7/2/2012	4.4	11/28/2011	0.02	8/1/2012	5.21
	no data		12/12/2011	1.4	12/12/2011	0.55	no data		9/4/2012	230.0	10/31/2011	0.41	9/4/2012	48.0	9/4/2012	270.0	9/4/2012	4.5	12/12/2011	0.02	9/4/2012	4.99
Chemical Statistics																						
1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴		
Does the Well Satisfy a Steady State Condition? ¹	#DIV/0!		YES		YES		#DIV/0!		YES		#DIV/0!		YES		YES		YES		YES		YES	
Number of Data Points	0		6		5		0		8		1		8		8		8		6		8	
Slope	#DIV/0!		-0.010		-0.005		#DIV/0!		-0.150		#DIV/0!		-0.028		0.034		0.001		0.000		-0.002	
Intercept	#DIV/0!		410.2367		207.2804		#DIV/0!		6415.6581		#DIV/0!		1218.2731		-1094.8677		-36.9877		7.8774		74.8057	
Standard Error of Estimates	#DIV/0!		0.208		0.102		#DIV/0!		16.529		#DIV/0!		3.098		18.062		0.319		0.003		0.326	
X Variable Coefficient	Insufficient Data		Insufficient Data		Insufficient Data		Insufficient Data		-0.15017609		Insufficient Data		-0.02837902		0.03361606		0.00100584		Insufficient Data		-0.00169179	
P-Value	Insufficient Data		Insufficient Data		Insufficient Data		Insufficient Data		0.129		Insufficient Data		0.126		0.731		0.540		Insufficient Data		0.352	
Trend Analysis ²	Insufficient Data		Insufficient Data		Insufficient Data		Insufficient Data		No Significant Trend		Insufficient Data		No Significant Trend		No Significant Trend		No Significant Trend		Insufficient Data		No Significant Trend	
Trend Analysis Result ³	Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping	

Notes:

- 1 - Steady-state (stable) = slope less than error
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- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
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- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
- 'DCE' - Dichloroethene.
- 'PCE' - Tetrachloroethene.
- 'TCE' - Trichloroethene.

Table 10

GE OHD 008 817 312
GE Aviation Evendale, Ohio - Groundwater IRM
Summary of Extraction Well Influent Chemical Statistical Approach

EW-8D	Chemical Data																						
	1,1,1-TCA µg/L		1,1-DCA µg/L		1,1-DCE µg/L		Chloroethane µg/L		cis-1,2-DCE µg/L		PCE µg/L		trans-1,2-DCE µg/L		TCE µg/L		Vinyl Chloride µg/L		TCA Group ⁴ µmol/L		TCE Group ⁴ µmol/L		
	no data		2/7/2012	1.9	no data		no data		2/7/2012	8.7	no data		2/7/2012	4.9	no data		2/7/2012	8.6	2/7/2012	0.02	2/7/2012	0.28	
	no data		3/5/2012	1.7	no data		no data		3/5/2012	8.3	no data		3/5/2012	4.8	no data		3/5/2012	6.9	3/5/2012	0.02	3/5/2012	0.25	
	no data		4/2/2012	2.1	9/26/2011	0.46	no data		4/2/2012	10.0	no data		4/2/2012	5.4	no data		4/2/2012	8.5	4/2/2012	0.03	4/2/2012	0.29	
	no data		5/1/2012	2.0	10/17/2011	0.53	no data		5/1/2012	9.0	no data		5/1/2012	5.3	no data		5/1/2012	7.9	5/1/2012	0.02	5/1/2012	0.27	
	no data		6/1/2012	1.8	10/31/2011	0.43	no data		6/1/2012	8.8	no data		6/1/2012	4.8	no data		6/1/2012	8.2	6/1/2012	0.02	6/1/2012	0.27	
	no data		7/2/2012	1.8	11/14/2011	0.43	no data		7/2/2012	7.8	no data		7/2/2012	4.4	no data		7/2/2012	11.0	7/2/2012	0.02	7/2/2012	0.3	
	no data		8/1/2012	1.7	4/2/2012	0.7	no data		8/1/2012	8.5	no data		8/1/2012	4.5	no data		8/1/2012	9.1	8/1/2012	0.02	8/1/2012	0.28	
	no data		9/4/2012	1.5	5/1/2012	0.42	no data		9/4/2012	7.3	no data		9/4/2012	3.6	no data		9/4/2012	8.7	9/4/2012	0.02	9/4/2012	0.25	
Sample Date and Result	Chemical Statistics																						
	1,1,1-TCA		1,1-DCA		1,1-DCE		Chloroethane		cis-1,2-DCE		PCE		trans-1,2-DCE		TCE		Vinyl Chloride		TCA Group ⁴		TCE Group ⁴		
	#DIV/0!		YES		YES		#DIV/0!		YES		#DIV/0!		YES		#DIV/0!		YES		YES		YES		
Does the Well Satisfy a Steady State Condition? ¹		0		8		6		0		8		0		8		0		8		8		8	
Number of Data Points		#DIV/0!		-0.002		0.000		#DIV/0!		-0.006		#DIV/0!		-0.006		#DIV/0!		0.008		0.000		0.000	
Slope		#DIV/0!		67.2704		-16.0565		#DIV/0!		270.9346		#DIV/0!		240.8675		#DIV/0!		-309.9243		1.1302		0.3201	
Intercept		#DIV/0!		0.160		0.113		#DIV/0!		0.712		#DIV/0!		0.409		#DIV/0!		1.103		0.004		0.021	
Standard Error of Estimates		Insufficient Data		-0.00159467		Insufficient Data		Insufficient Data		-0.00639216		Insufficient Data		-0.00575316		Insufficient Data		0.00776013		-0.00002705		-0.00000111	
X Variable Coefficient		Insufficient Data		0.101		Insufficient Data		Insufficient Data		0.132		Insufficient Data		0.034		Insufficient Data		0.221		0.267		0.992	
P-Value		Insufficient Data		No Significant Trend		Insufficient Data		Insufficient Data		No Significant Trend		Insufficient Data		Significant Negative Trend		Insufficient Data		No Significant Trend		No Significant Trend		No Significant Trend	
Trend Analysis ²		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping		Evaluate System Optimization		Continue Pumping		Continue Pumping		Continue Pumping		Continue Pumping	
Trend Analysis Result ³																							

Notes:

- 1 - Steady-state (stable) = slope less than error
- 2 - Significant trend identified by P<0.05 (95% confidence; a positive trend indicates increasing chemical concentrations; a negative trend indicates decreasing chemical concentrations)
- 3 - Analysis result determined by the P value. If the P<0.05 an action is required (evaluate system optimization if the trend analysis is negative, Evaluate System Optimization if the trend is positive).
- 4 - TCA Group includes 1,1,1-TCA; 1,1-DCA; 1,1-DCE; Chloroethane. TCE Group includes cis-1,2-DCE; PCE; trans-1,2-DCE; TCE; Vinyl Chloride.
- 5 - The statistics for the TCA Group and the TCE Group were completed using the sum of the mass equivalents of the component compounds.

Acronyms:

- 'TCA' - Trichloethane.
- 'DCA' - Dichloroethane.
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Figures

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GROUNDWATER IRM MONITORING LOCATIONS

-  PERCHED MONITORING WELL LOCATION
 USG MONITORING WELL LOCATION
 LSG MONITORING WELL LOCATION
 EXTRACTION WELL



A horizontal number line representing distance in feet. The line starts at 0 and ends at 1,800. There are major tick marks at 0, 450, 900, 1,350, and 1,800. The segments between these tick marks are all of equal length, representing 450 feet each. The word "Feet" is written below the line.

I:\Ch2m-Hill-Idc-10361\48566-Ge-Eventdale-Rct\Docs\Reports\3rd Qtr Report 2012\Figures\002 - Figure 2 - Perched - 3rd Qtr 2012.mxd

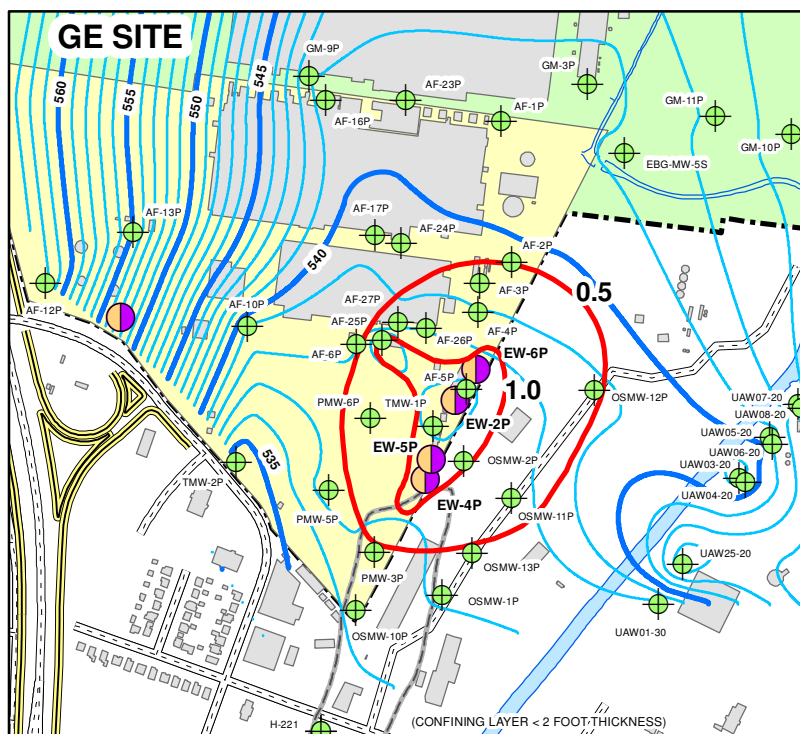
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Perched Zone

**Approximate Drawdown (ft)
July 10, 2012**

*Based on Manual & Transducer
Measurements*

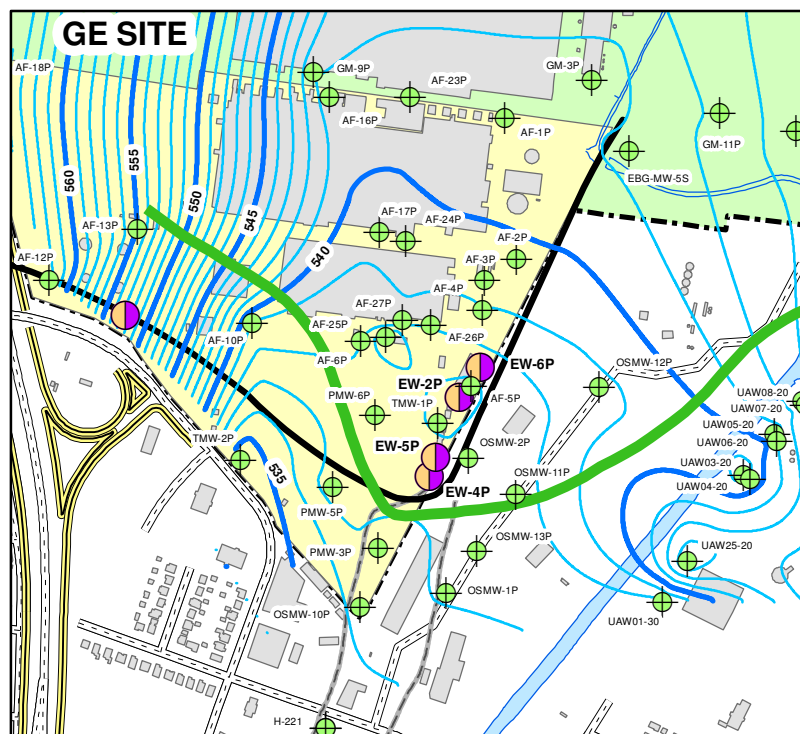
**Estimated Drawdown
(feet)** —



Perched Zone

**Design Capture
Zone (320 gpm)** —

**Apparent Capture
Zone (205 gpm)
7/10/2012** —



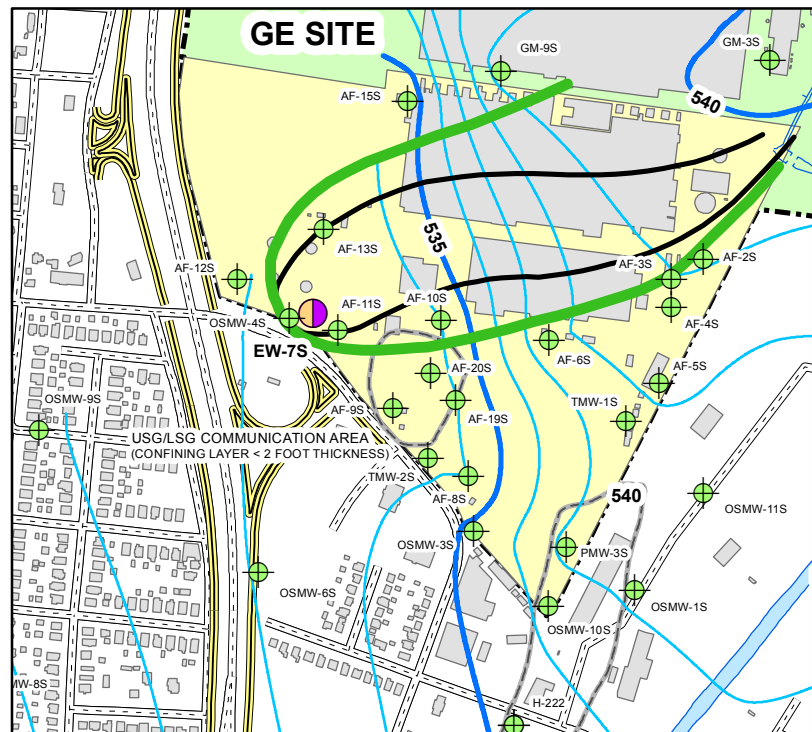
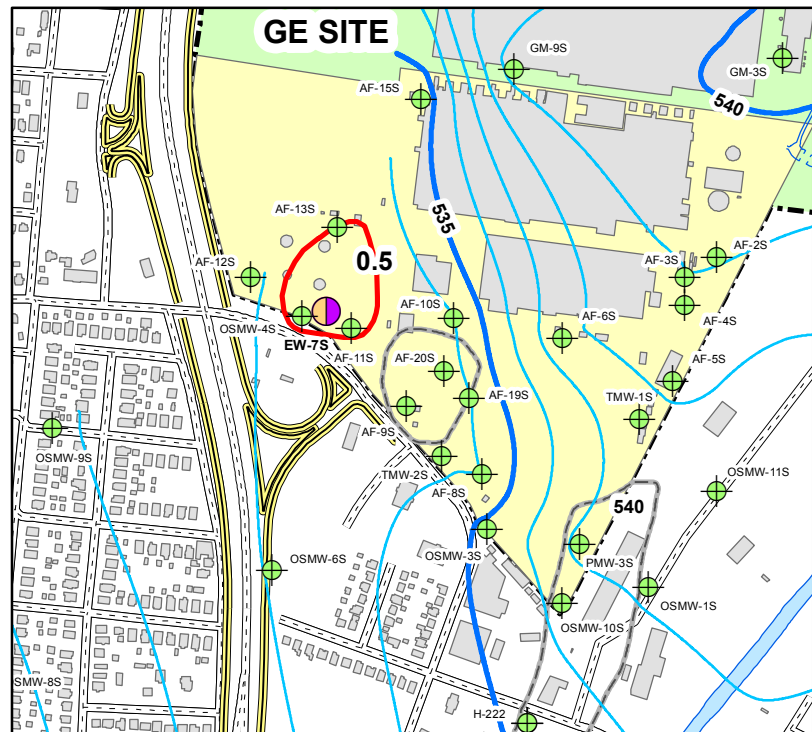
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GE
EVENTDALE, OHIO

**PERCHED UNIT
ESTIMATED DRAWDOWN
AND CAPTURE ZONE**



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I:\Ch2m-Hill-Ldc.10361\48566.Ge-Evendale-Rcn\Docs\Reports\3rd Qtr Report 2012\Figures\004 - Figure 4 - LSG - 3rd 2012.mxd

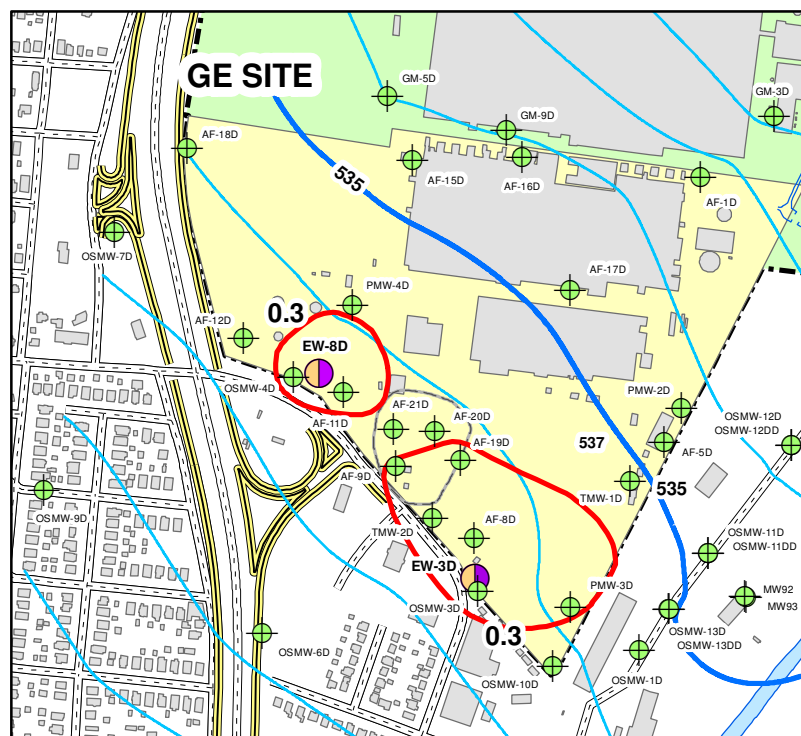
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LSG Zone

**Approximate Drawdown (ft)
July 10, 2012**

*Based on Manual & Transducer
Measurements*

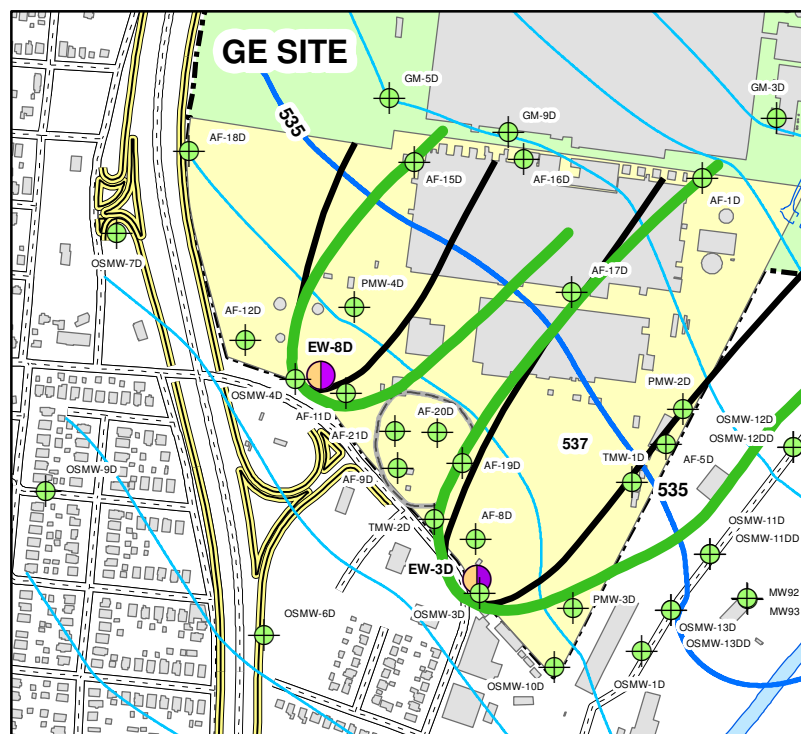
**Estimated Drawdown
(feet)** ————



LSG Zone

**Design Capture
Zone (160 gpm)** ————

**Apparent Capture
Zone (100 gpm)
7/10/2012** ————



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GE
EVENDALE, OHIO

**LSG UNIT
ESTIMATED DRAWDOWN
AND CAPTURE ZONES**

